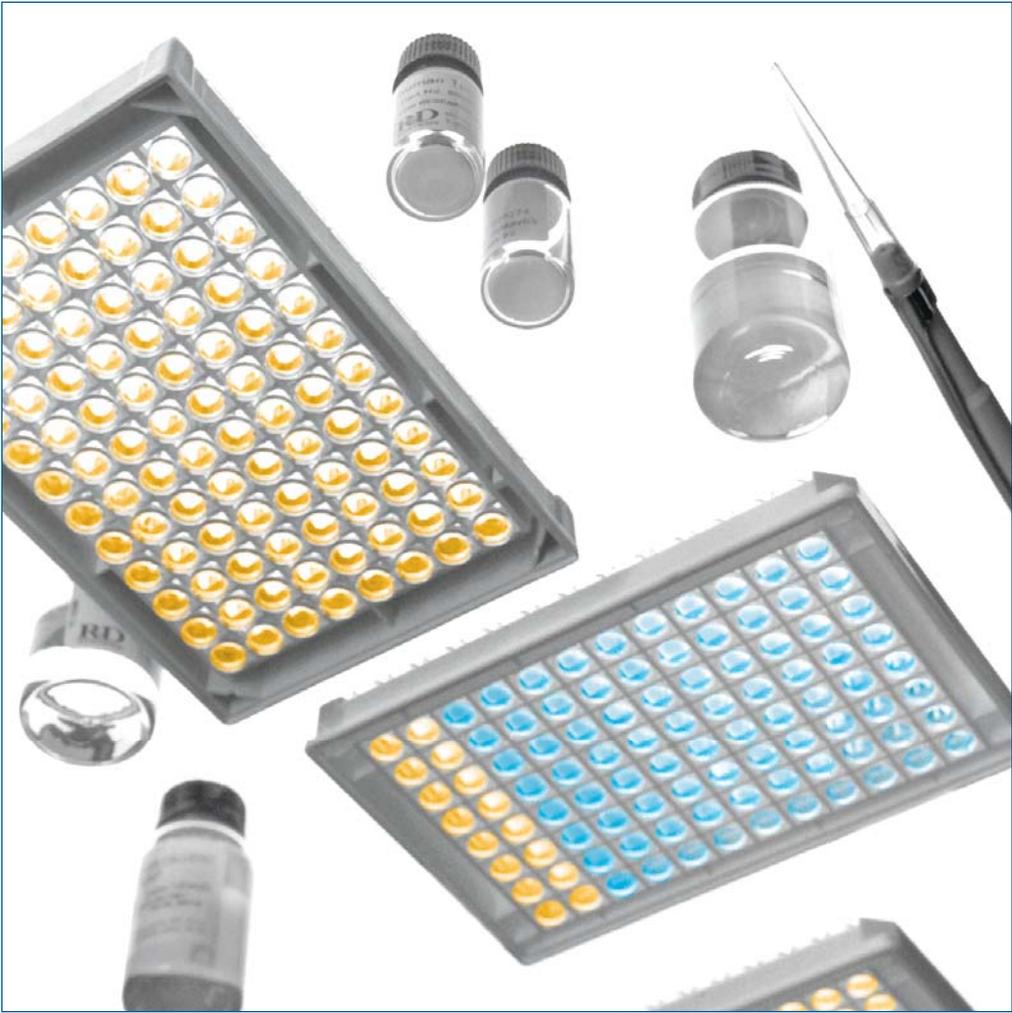


ELISA Reference Guide & Catalog



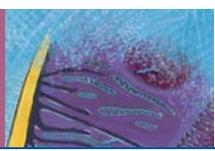


Table of Contents

Introduction 3-14

- Making a Quality ELISA 3
- Evaluating the Performance of ELISA Kits 3
 - Quality Antibodies. 4
 - Precision & Reproducibility. 4
 - Specificity. 5
 - Recovery 6
 - Linearity of Dilution. 6
 - Sensitivity 7
 - Calibration 7
- Analytical Testing Service. 7
- ISO Certification 7
- Assay Principles 8-14
 - Quantikine® & Quantikine® IVD®
Colorimetric sandwich ELISAs 8
 - Quantikine HS
High Sensitivity colorimetric sandwich ELISAs. 9
 - QuantiGlo®
Chemiluminescent ELISAs with a wide dynamic range 10
 - Fluorokine® E
Active MMP assays 11
 - Parameter™ Assay
Quantitative assays for small molecules 12
 - Surveyor™ Assay
ELISAs for quantifying intracellular signaling molecules 13
 - Cell-Based ELISA
ELISAs for intact, fixed cells. 14

ELISA Troubleshooting Guide 15-16

Alphabetical Listing of ELISAs & References 17-85

DuoSet ELISA Development Systems 86

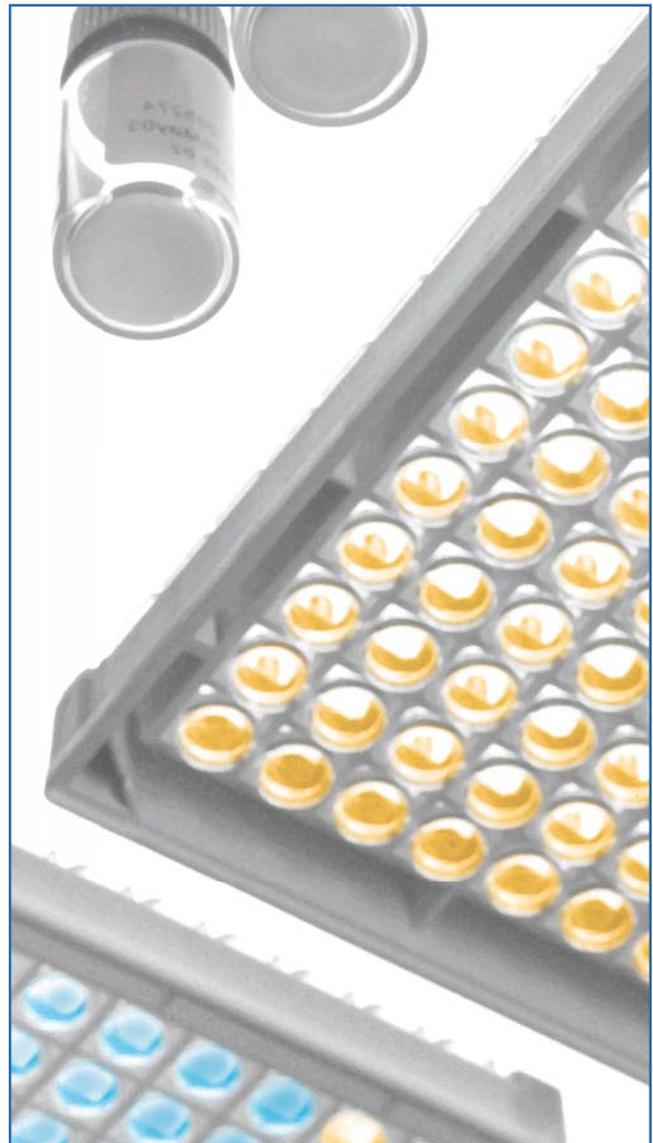
DuoSet IC (Intracellular) Assay Development Kits 86

- ELISAs
- Phosphatase Activity Assays
- Transcription Factor Activity Assays
- Kinase Activity Assays

Multiplex Assays/Arrays 87-90

- Proteome Profiler™ Membrane-based Antibody Arrays
- Proteome Profiler™ 96 Microplate-based Antibody Arrays
- Mosaic™ ELISA
- Fluorokine MAP (Luminex®-based Assays)

Index 91-92

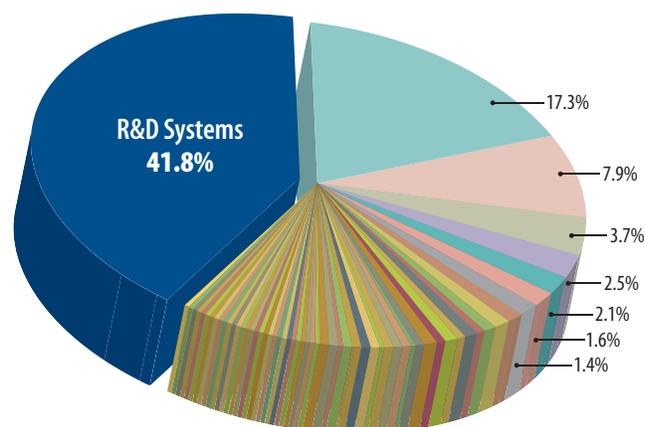


R&D Systems ELISA Reference Guide

R&D Systems has over 20 years of experience designing, testing, and optimizing immunoassay kits to ensure the highest level of performance in analyte quantification. We currently offer more than 400 Quantikine®, Quantikine IVD®, QuantiGlo®, Fluorokine® E, Parameter™, Surveyor™ IC, and Cell-Based ELISA Kits for a number of different analytes and species, including human, mouse, rat, canine, primate, and porcine. Choosing quality reagents that will lead to results you can trust is one of the most critical aspects of scientific research. But how do you know if you are choosing a quality product? One measure of product quality is the frequency of citations in the scientific literature. R&D Systems ELISAs are referenced more than any other ELISA manufacturer, and we are honored by the trust that so many have placed in our products.

Since researchers often rely on primary literature to aid in the selection of reagents for their studies, we have compiled a searchable database that contains published scientific journal articles citing the use of our ELISA products, including specific applications and sample types. This ELISA Reference Guide and Catalog is a snapshot of our current database. It presents our assays in alphabetical order by analyte with selected references from our database listed below each kit (beginning on page 16). Reference selection was not based on the exclusive use of R&D Systems products, nor judged for inclusion based on scientific merit. Many

references listed in this guide were selected based on the use of sample types that we do not validate in-house, such as various tissue homogenates, synovial fluid, and others.



R&D Systems is the Most Referenced ELISA Manufacturer. A literature survey was conducted to determine the number of citations referencing the use of R&D Systems ELISA Kits compared to the number referencing ELISAs manufactured by other companies. The survey included 860 manuscripts that were published in one of 44 high impact journals from several different general research areas, including immunology, signal transduction, development, neuroscience, bone/endocrinology, and hematology. A total of 433 ELISA citations referencing immunoassays from 66 different vendors were identified in the survey.

R&D Systems Complete ELISA Kits

ASSAY *	DESCRIPTION
Quantikine ELISA	Quantikine Kits are our respected line of complete colorimetric sandwich ELISAs for human, mouse, rat, canine, rhesus macaque, and porcine cytokines, chemokines, growth factors, adhesion molecules, MMPs, caspases, and more.
Quantikine HS ELISA	Quantikine HS Kits are highly sensitive colorimetric sandwich ELISAs for the quantitation of human cytokines. These kits can detect femtogram levels of analyte.
Quantikine IVD ELISA	Quantikine IVD Kits are colorimetric sandwich ELISAs for <i>in vitro</i> diagnostic (IVD) use. IVD-labeled kits currently available include Epo, sTfR, and β_2 -Microglobulin.
QuantiGlo ELISA	QuantiGlo Kits are chemiluminescent ELISAs for human proteins. These kits offer increased sensitivity and a wider dynamic range, reducing the need for extra dilutions. A chemiluminescence plate reader is required to run these assays.
Fluorokine E Kits	Fluorokine E Kits are capture antibody-based fluorometric enzyme assays for the quantitation of active and total MMPs. A fluorometric plate reader is required to run these assays.
Parameter Kits	Parameter Kits are complete assay kits for the quantitation of eicosanoids, cyclic nucleotides, and other small molecules.
Surveyor IC ELISA	Surveyor IC ELISA Kits are colorimetric kits designed to detect and measure intracellular factors important for cell signaling.
Cell-Based ELISA	Cell-Based ELISA Kits are fluorescence assays designed to detect a target intracellular protein and a second normalization protein in whole, fixed cells within the same microplate well. Lysate preparation is not required.

Quantikine, Quantikine IVD, QuantiGlo, and Fluorokine are registered trademarks of R&D Systems, Inc. Surveyor and Parameter are trademarks of R&D Systems, Inc.

* Assay Principles for each kit type can be found on pages 8-14.



Introduction

R&D Systems is Committed to Producing High Quality ELISA Products

Making a Quality ELISA

Producing a quality ELISA strongly depends on optimization during development. R&D Systems ELISA Kits are required to meet stringent manufacturing and quality control standards to ensure that they provide the highest levels of performance and consistency. Quantikine Kits are complete, fully validated, ready-to-run immunoassays that are designed to measure proteins in a number of complex sample types. These assays are based on the two-site sandwich immunoassay principle in which two highly specific antibodies are used to detect a target analyte. Multiple steps are taken during development to ensure that Quantikine ELISA Kits will provide superior performance without the need for further assay optimization by the customer. These include:

- Careful selection of antibody pairs for optimal performance
- Automated microplate coating with precision of less than 10% coefficient of variation (CV)
- Cross-reactivity and interference testing with a panel of up to 100 factors
- Formulation of diluents that alleviate interferences due to matrix phenomena and heterophilic antibody interactions
- Correlation to NIBSC/WHO Standards when available
- Performance testing with all validated sample types



Evaluating the Performance of ELISA Kits

Quantikine ELISA Kits provide our customers with the precision, specificity, accuracy, and sensitivity that they expect due to rigorous validation testing. This testing includes:

- Intra- and inter-assay precision
- Analysis of natural samples in each of the validated matrices such as serum, plasma, cell culture supernate, and more
- Interference of blood components
- Linearity
- Recovery
- Component and kit stability
- Edge effect

These tests are performed over many months by several technicians to ensure that the assay will be reproducible both well-to-well and lot-to-lot. Data obtained from performance testing on validation batches of our kits are provided in the product data sheets.

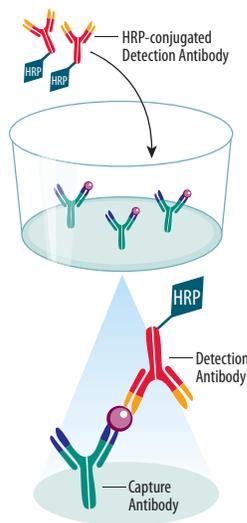
The validation process results in a comprehensive data packet that is reviewed by quality assurance personnel, who ensure that the test results meet established guidelines. These guidelines require that:

- Controls meet established specifications
- Non-specific binding, low standard and high standard signals meet the established specifications
- Sensitivity, determined by assaying multiple replicates of the zero standard, falls within the established specifications
- Standards match master calibrators within the established specification

The following sections outline the variables that may affect the outcome of your ELISA experiments, and how these variables are addressed during the development of R&D Systems Quantikine ELISA Kits. By carefully considering these variables before the product is released, our scientists ensure that Quantikine Kits will provide you with reliable, reproducible results without the need for further assay optimization.

Quality Antibodies Provide the Foundation for a High Performance ELISA

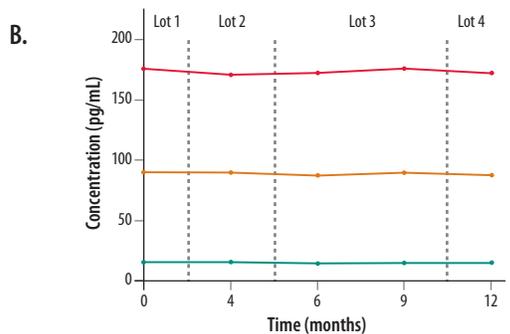
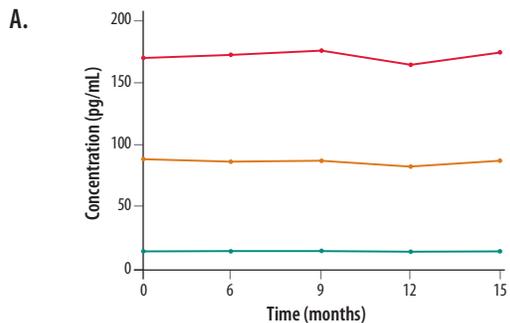
Our ELISA kits are developed using highly purified antibodies. For our sandwich ELISA kits, including the Quantikine, Quantikine HS, Quantikine IVD, and QuantiGlo Kits, testing is performed on several different monoclonal and polyclonal antibodies to determine which combination optimally couples for use in analyte detection. Selected antibodies are carefully titrated to ensure that the concentrations chosen will give the best possible results for the assay. During development, the capture antibody is coated onto the microplate in several different concentrations to determine the concentration that offers the most binding and the best precision. Different concentrations of the detection antibody are subsequently tested to determine the concentration at which the detection antibody optimally pairs with the capture antibody to give the best signal-to-noise ratio.



Antibody Pairs Are Carefully Selected for Quantikine ELISA Development. Quantikine ELISAs are based on a two-site sandwich principle in which two highly specific antibodies are used to detect the target analyte. Quantikine Kits provide a 96-well microplate pre-coated with a capture antibody specific for the analyte of interest. Upon incubation with experimental samples, standards, or controls, the target analyte is captured by this antibody. A conjugated detection antibody that binds to a different epitope on the target analyte is used to complete the sandwich. A substrate solution is subsequently added to produce a signal that is proportional to the amount of analyte bound.

Precision & Reproducibility: Providing Confidence in Your Results

Immunoassay precision is defined as the reproducibility of results within and between assays. This characteristic of an immunoassay is extremely important in order to: 1) provide assurance that the results obtained throughout a study are accurate and reproducible from one experiment to the next and 2) determine if two results are the same or different. Precision is measured as a coefficient of variation (CV) from the mean value. Two types of precision should be considered, intra-assay precision and inter-assay precision. Intra-assay precision is the reproducibility between wells within an assay. This allows the researcher to run multiple replicates of the same sample on one plate and obtain similar results. Inter-assay precision is the reproducibility between assays. Inter-assay precision guarantees that the results obtained will be reproducible using multiple kits over a period of time. R&D Systems Quantikine Immunoassays typically have CV values less than 10% across the standard curve for both intra- and inter-assay precision. These low CV values allow the researcher to perform repeated assays and be confident that the results are consistent throughout the study.

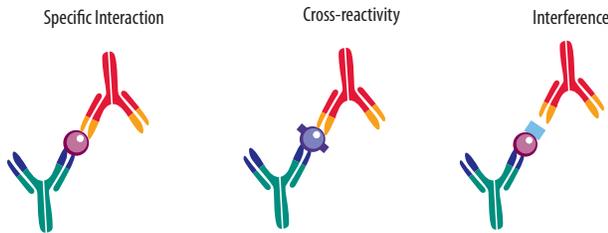


Quantikine ELISA Kits Are Tested for Stability and Reproducibility. A. Three samples with different concentrations of IL-6 (colored lines) were assayed using the same lot of the Human IL-6 Quantikine ELISA Kit (Catalog # D6050) over a 15 month period. B. Three samples with differing IL-6 concentrations (colored lines) were assayed using four different lots of the Human IL-6 Quantikine ELISA Kit (Catalog # D6050) over a 12 month period.



Specificity:
Measuring Only the Analyte of Interest

Immunoassay specificity can be compromised by antibody cross-reactivity and interference. Cross-reactivity occurs when a molecule other than the analyte of interest is bound by both antibodies leading to a false positive result. Interference occurs when other substances in the sample matrix modify the antigen-antibody interaction, preventing an assay from recognizing its designated analyte.



The Use of Quality Antibodies Is the First Step in the Development of a Reliable ELISA. Antibodies play a crucial role in the development of a high performance ELISA. Antibody pairs used for R&D Systems ELISAs are selected to ensure high signal, low background, and the best possible sensitivity. Antibodies are tested for specificity, cross-reactivity with molecules other than the target analyte, and interference with matrix components.

These problems are mitigated by proper development and testing. False positive results may be due to matrix effects that only diligent validation and quality control measures can identify. This being the case, an ELISA can not be judged based solely on whether or not it produces a signal, until that signal is confirmed to be produced by the analyte of interest. In most cases, this can be accomplished by assaying the linearity of dilution (see page 6).

R&D Systems carefully selects antibodies, optimizes coating and conjugate buffers, and selects assay diluents to eliminate matrix effects. To gauge the specificity of an assay, factors related to the analyte are tested for cross-reactivity and interference. The members of the panel and the results of this testing are reported in our product data sheets.

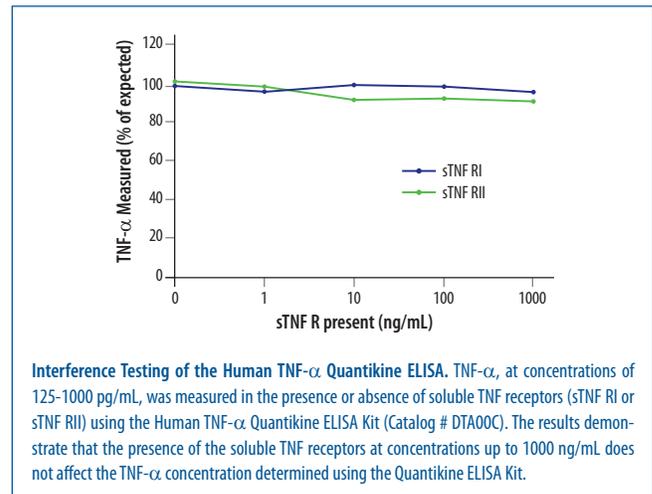
Binding differences may occur between natural and recombinant samples due to conformational changes of the antigen after it is bound to the capture antibody. These conformational changes may affect the binding of the detection antibody. Quantikine Kits are optimized so that the antibodies recognize both recombinant and natural antigen with equal efficacy.

Linearity Experiments Identify False Positive Signals

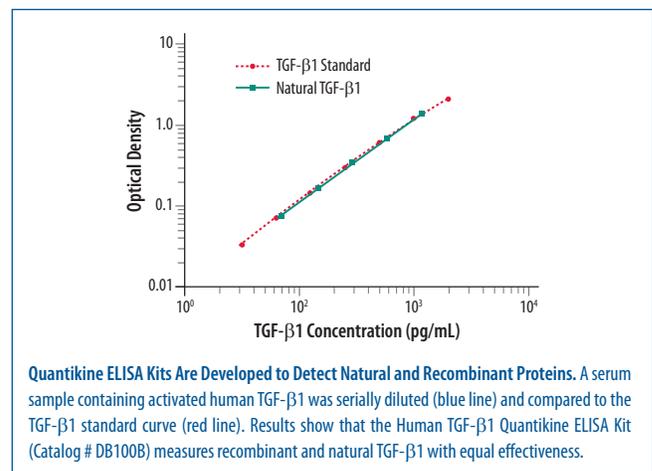
Sample Dilution	Quantikine Kit	Kit 2
	Analyte Concentration Detected (ng/mL)*	
	4.16	20.87
1:2	105%	73%
1:4	108%	ND
1:8	106%	ND
Linearity claim	85-115%	89-118%

* Samples were diluted prior to the assay as directed in the product data sheet.

False Positive ELISA Signals Can Be Identified by Assaying the Linearity of Dilution. Serial dilutions of a cell culture supernate were assayed for natural linearity using two different TIMP-2 ELISA Kits. Diluted samples measured using the Human TIMP-2 Quantikine Kit (Catalog # DTM200) gave recovery results between 105-108% of the neat sample, supporting the linearity claim of the kit. In contrast, the target analyte was not detectable beyond the first dilution in samples measured with the second kit, indicating that the assay was producing a false positive signal. ND=Not detectable.



Interference Testing of the Human TNF- α Quantikine ELISA. TNF- α , at concentrations of 125-1000 pg/mL, was measured in the presence or absence of soluble TNF receptors (sTNF RI or sTNF RII) using the Human TNF- α Quantikine ELISA Kit (Catalog # DTA00C). The results demonstrate that the presence of the soluble TNF receptors at concentrations up to 1000 ng/mL does not affect the TNF- α concentration determined using the Quantikine ELISA Kit.



Quantikine ELISA Kits Are Developed to Detect Natural and Recombinant Proteins. A serum sample containing activated human TGF- β 1 was serially diluted (blue line) and compared to the TGF- β 1 standard curve (red line). Results show that the Human TGF- β 1 Quantikine ELISA Kit (Catalog # DB100B) measures recombinant and natural TGF- β 1 with equal effectiveness.

Recovery

Complex sample matrices, such as serum and plasma, may contain interfering factors that affect the ability of an assay to accurately quantify the target analyte. Recovery experiments are used to determine if assays are affected by interfering factors. Low, medium, and high concentrations of analyte are spiked into all validated sample types and then analyzed for recovery. The results are expressed as a percentage of analyte recovered and are reported in each product data sheet. Our criteria require that recoveries are between 80-120% across the concentration range of the assay, demonstrating no quantifiable matrix interference for each sample type. If interfering factors are found, R&D Systems formulates diluents that minimize their effects.

Dkk-1 Recovery Analysis

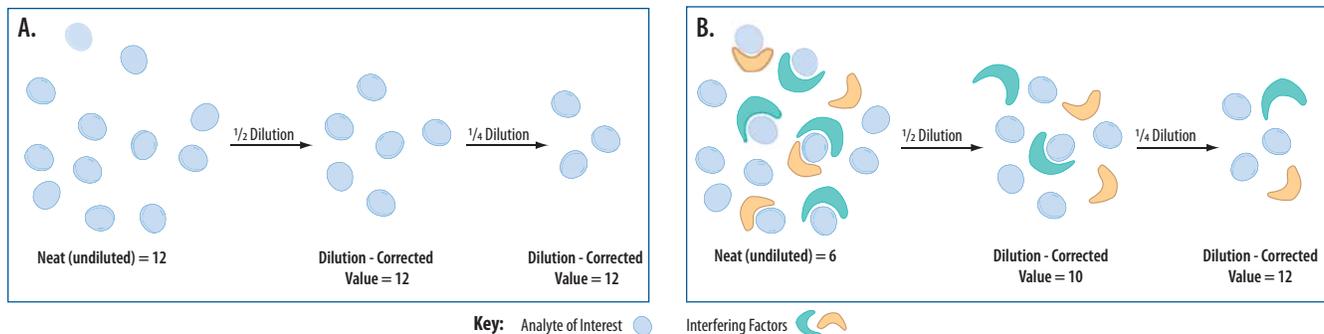
Sample	Average % Recovery	Range
Cell culture media* (n=4)	103	97-109%
Serum* (n=4)	99	85-115%
EDTA plasma* (n=4)	94	86-102%
Heparin plasma* (n=4)	98	92-106%

* Samples were diluted prior to the assay as directed in the product data sheet.

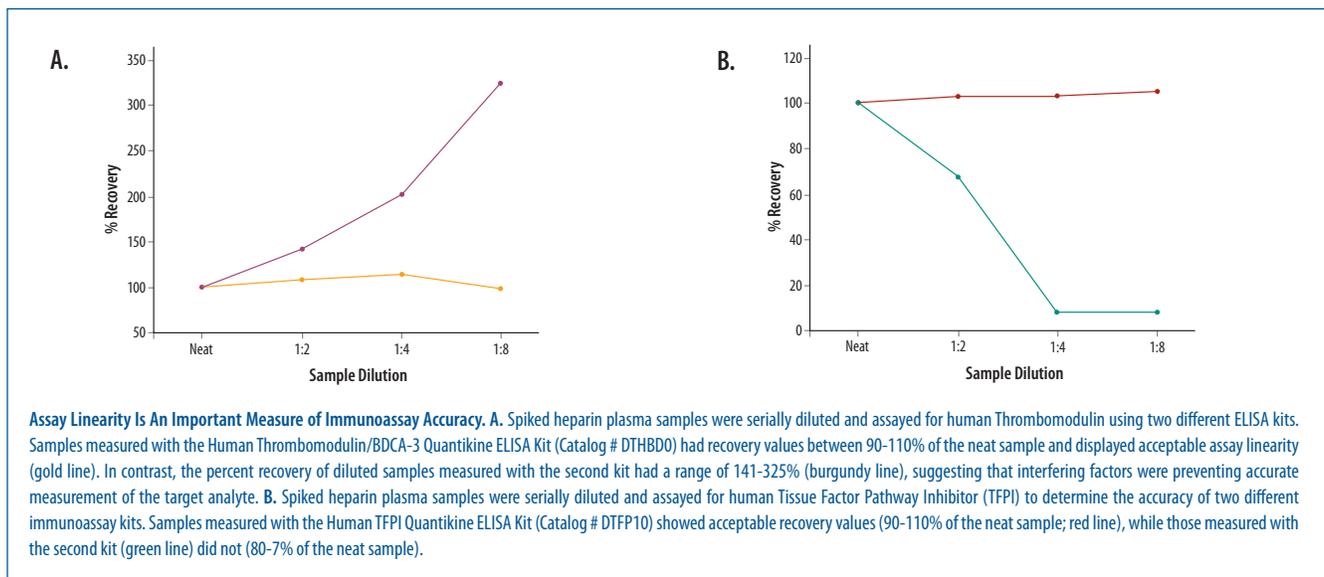
Analysis of the Recovery of Dkk-1 Using the Quantikine ELISA Kit. The recovery of Dkk-1 spiked to various levels throughout the range of the assay was assessed for all validated sample types of the Human Dkk-1 Quantikine ELISA (Catalog # DKK100).

Linearity of Dilution

Dilutions should always derive the same final analyte concentration for a sample. This is known as assay linearity. Interfering factors can compromise assay linearity unless the assay is designed to overcome these effects. We generate a dilution series using kit diluents across the dynamic range of the assay for each validated sample type. The results are expressed as a percent observed from expected. Values between 80-120% show good assay linearity. Each product data sheet documents the mean and range of percent linearity for all validated sample types.



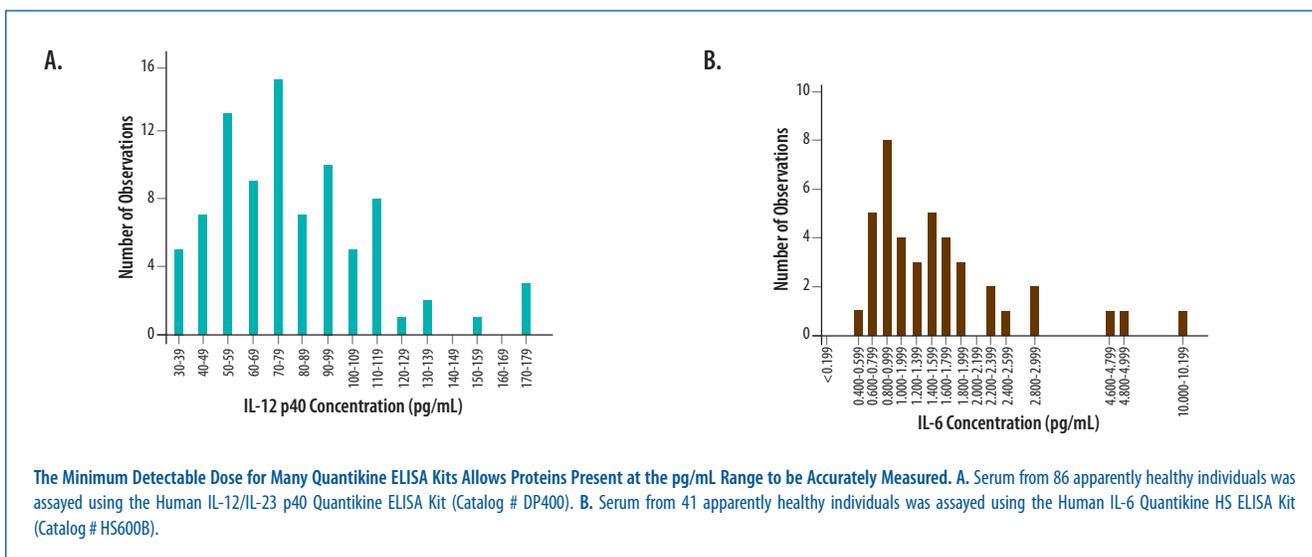
Linear Dilution to Assess Matrix Effects. A. Expected results from a linearity of dilution experiment when no interfering factors are present in the matrix. B. Potential results from the same experiment if interfering factors are present in the matrix. Factors in complex matrices can interfere with the analyte of interest. This effect may be revealed by unexpected linear dilution values.





Sensitivity: Measuring Proteins at the pg/mL Range

The minimum detectable dose is the lowest measurable value that is statistically different from zero. It is calculated by adding two standard deviations to the mean optical density value of several zero standard replicates and determining the corresponding analyte concentration from the standard curve. The better the sensitivity of an assay, the lower the useful working range (standard curve range) will be. Quantikine ELISAs are optimized to ensure high signal, low background, and the best sensitivity possible.



Calibration:

Ensuring Consistency from One Lot to the Next

Each Quantikine ELISA Kit includes an immunoassay standard that is calibrated against highly purified material. R&D Systems assigns a mass value to a standard based on comparison to a master calibrator. These master calibrators are manufactured during the development of an ELISA and are used to maintain the consistency of kit standards. All future lots are compared to the master calibrator to ensure that no drift in sample values occurs.

Due to the fact that different mass value assignments are made for ELISA standards, sample values produced using one manufacturer's kit may not be directly comparable to those obtained using another manufacturer's kit. R&D Systems supplies a correlation to a WHO international reference material, when available. This calibration allows a researcher to take the values obtained with a Quantikine ELISA Kit and compare them to values obtained with other assays (assuming that the other ELISA manufacturer provides this conversion factor as well).

Analytical Testing Service

R&D Systems Analytical Testing Service (ATS) utilizes Quantikine, QuantiGlo, and Parameter Immunoassays to test customers' samples. R&D Systems ATS Facility features state-of-the-art equipment that is maintained following established maintenance schedules. Unique ATS accession numbers are assigned to all projects and samples, and on-site specimen storage areas are protected by a 24 hour security system. Personnel training in the GLP and QSR regulations is documented, and routine internal audits and inspections assure compliance with protocols, laboratory SOPs, and pertinent regulations. Please see our website at www.RnDSystems.com/go/AssayServices.

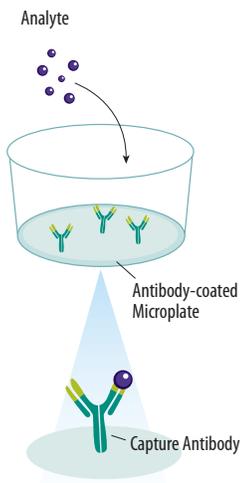
ISO Certification

R&D Systems maintains high standards in the design, development, and manufacture of reagents for the research community. Our quality management system is certified to ISO 9001:2008. In addition, the design and manufacture of our *in vitro* diagnostic ELISA products have been certified to ISO 13485:2003. ISO certification is achieved by subjecting our internal quality management systems to review by an objective, independent third party on a periodic basis. To view a current copy of our certificate, please visit our website at www.RnDSystems.com/go/ISOcertificate.

Assay Principles

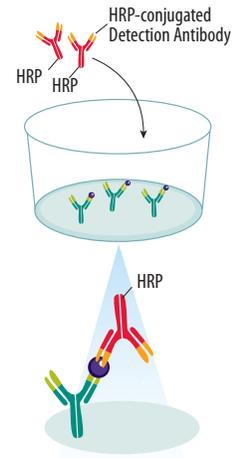
Quantikine & Quantikine IVD Assay Principle: Complete colorimetric ELISA kits for soluble or intracellular factors

Step 1



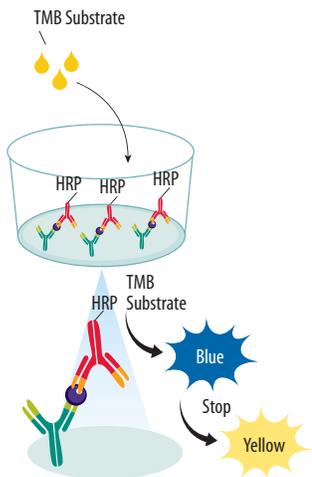
A microplate pre-coated with capture antibody is provided. Samples or standards are added and any analyte present is bound by the immobilized antibody. Unbound materials are washed away.

Step 2



An HRP-labeled antibody (detection antibody) is added and binds to the captured analyte. Unbound detection antibody is washed away.

Step 3

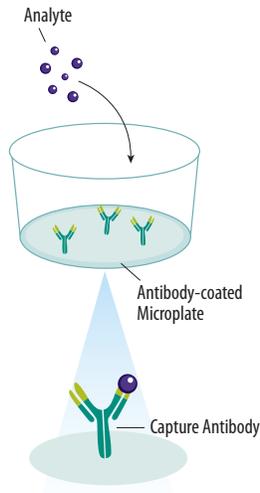


Tetramethylbenzidine (TMB) substrate solution is added to the wells and a blue color develops in proportion to the amount of analyte present in the sample. Color development is stopped turning the color in the wells to yellow. The absorbance of the color at 450 nm is measured, producing a signal that is proportional to the amount of analyte bound.



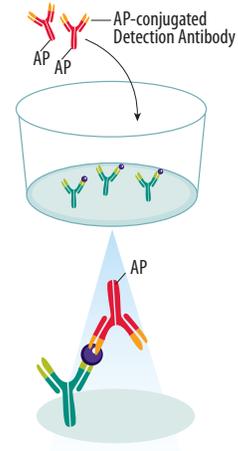
Quantikine HS (High Sensitivity) Assay Principle: Complete colorimetric ELISA kits capable of detection at femtogram levels of analyte

Step 1



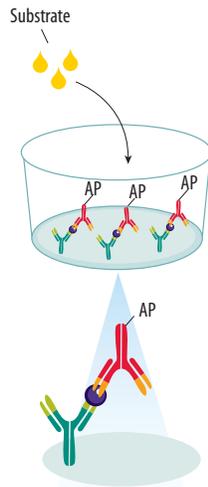
A microplate pre-coated with capture antibody is provided. Samples or standards are added and any analyte present is bound by the immobilized antibody. Unbound materials are washed away.

Step 2



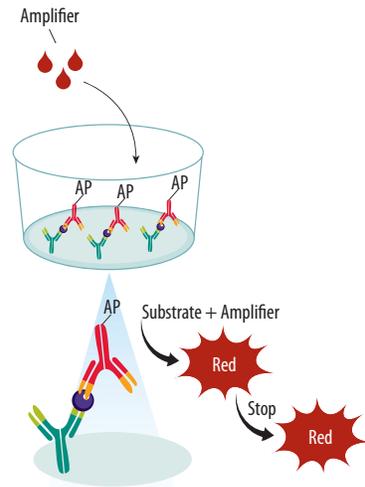
An alkaline phosphatase (AP)-labeled detection antibody is added and binds to the captured analyte. Unbound detection antibody is washed away.

Step 3



NADPH substrate solution is added. Plates are NOT washed.

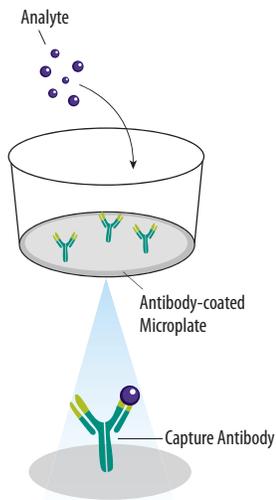
Step 4



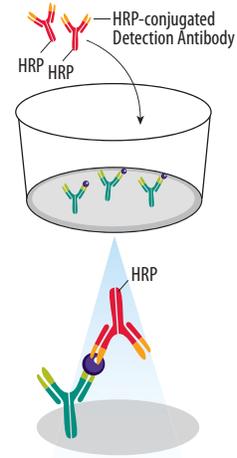
Amplifier solution is added and a red color develops in proportion to the amount of analyte present in the sample. Stop solution is added (color remains red) and the absorbance of the color at 490 nm is measured.

QuantiGlo Assay Principle: Chemiluminescence-based ELISA kits exhibiting a wide dynamic range

Step 1



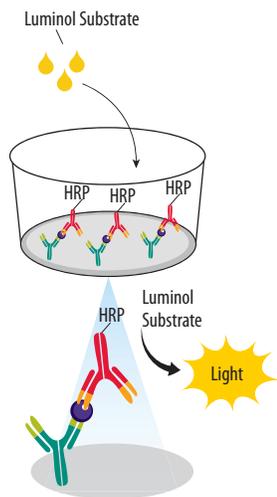
Step 2



A microplate pre-coated with capture antibody is provided. Samples or standards are added and any analyte present is bound by the immobilized antibody. Unbound materials are washed away.

An HRP-labeled detection antibody is added and binds to the captured analyte. Unbound detection antibody is washed away.

Step 3

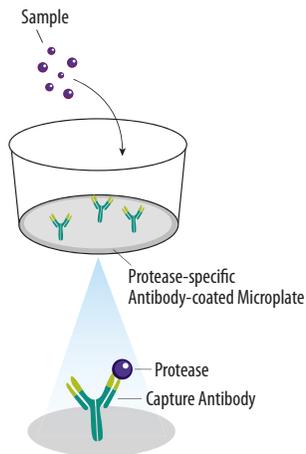


Enhanced luminol substrate is added and light is produced in proportion to the amount of analyte present in the sample. A microplate luminometer is used to measure the intensity of light emitted.



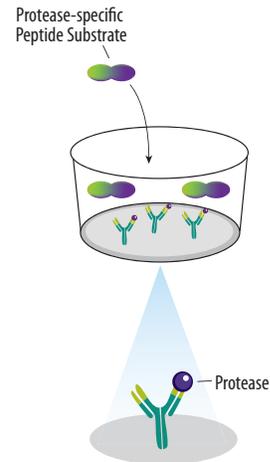
Fluorokine E Assay Principle: Capture antibody-based fluorometric enzyme assays for the quantitation of active MMPs in serum, plasma, and/or cell culture supernates

Step 1



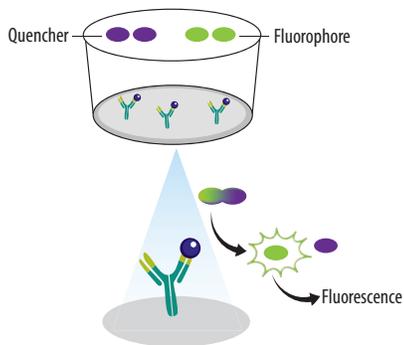
A black microplate is pre-coated with a protease-specific antibody. The sample is added allowing both pro- and active forms of the enzyme to bind to the immobilized antibody. Unbound proteases are washed away.

Step 2



A protease-specific peptide substrate (green & purple) is added. The substrate features a fluorophore (green) and quencher molecule (purple) on opposite sides of the prospective cleavage site.

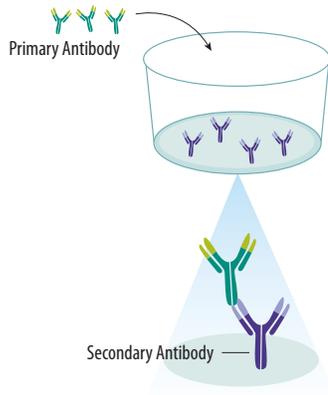
Step 3



Active enzyme cleaves the peptide substrate between the fluorophore and the quencher molecules, increasing the distance between them. Energy from the fluorophore is now available as a fluorometric signal since the quencher is no longer close enough to absorb it. The resulting signal is directly proportional to the amount of active protease bound in the initial step.

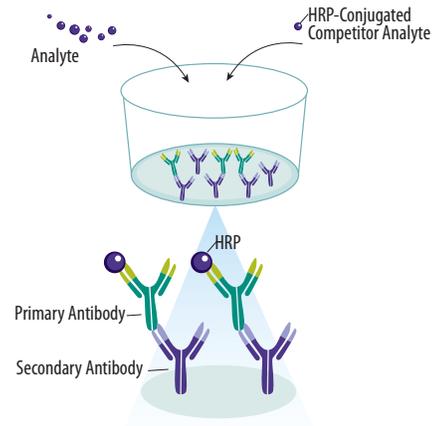
Parameter Competitive Binding Assay Principle[†]: Complete colorimetric kits for the quantitation of small molecule analytes

Step 1



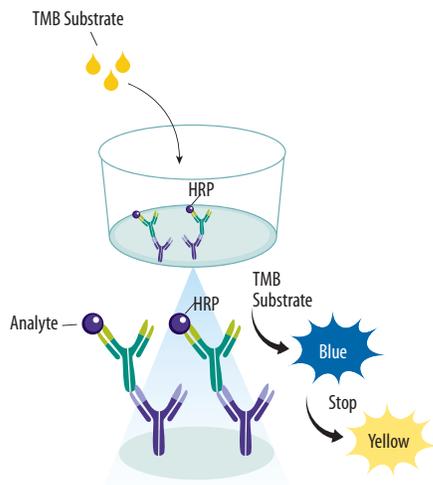
A microplate pre-coated with the appropriate secondary antibody is provided. A primary antibody specific to the target analyte is added and bound by the immobilized secondary antibody. Unbound materials are washed away.

Step 2



The experimental sample containing the target analyte and an HRP-conjugated analyte analogue are added. Both have the capability of binding to the immobilized primary antibody-secondary antibody complex.[‡] Unbound analyte and competitor analyte are washed away.

Step 3



Tetramethylbenzidine (TMB) substrate solution is added to the wells and a blue color develops in proportion to the amount of HRP-conjugated competitor analyte bound to the immobilized primary antibody-secondary antibody complex. Color development is stopped turning the color in the wells to yellow. The absorbance of the color at 450 nm is measured, producing a signal that is inversely proportional to the concentration of analyte present in the sample.

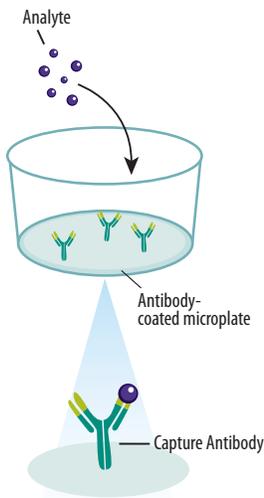
[†]The Creatinine Parameter Assay Kit (Catalog # KGE005) and the Total NO/Nitrite/Nitrate Parameter Kit (Catalog # KGE001) are not based on the competitive binding assay outlined. Please refer to the product specific data sheets for the appropriate protocols for these kits.

[‡]Some kits require an incubation of the primary antibody with either the antibody-coated microplate alone, or in combination with the sample containing the target analyte, prior to the addition of the HRP-conjugated competitor analyte. Other kits combine the primary antibody, sample, and HRP-conjugated competitor analyte in the wells in the first step. Please refer to the product specific data sheet for the appropriate protocol for each individual kit.



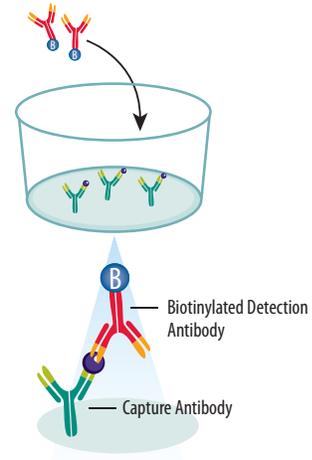
Surveyor IC Assay Principle: Complete microplate-based assays for measuring signal transduction and apoptosis-related molecules

Step 1



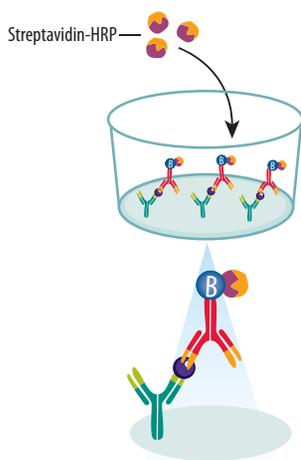
A microplate pre-coated with capture antibody is provided. Samples or standards are added and any analyte present is bound by the immobilized antibody. Unbound materials are washed away.

Step 2



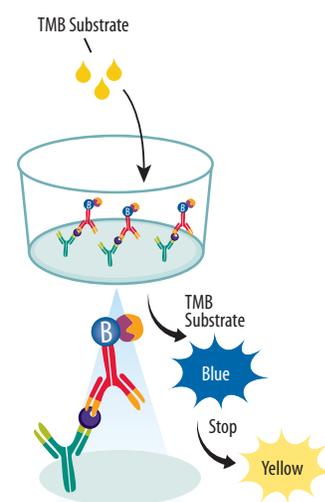
A second biotinylated antibody (detection antibody) is added and binds to the captured analyte. Unbound detection antibody is washed away.

Step 3



Streptavidin-HRP is used to bind to the detection antibody. Unbound Streptavidin-HRP is washed away.

Step 4



Tetramethylbenzidine (TMB) substrate solution is added to the wells and a blue color develops in proportion to the amount of analyte present in the sample. Color development is stopped turning the color in the wells to yellow. The absorbance of the color at 450 nm is measured.

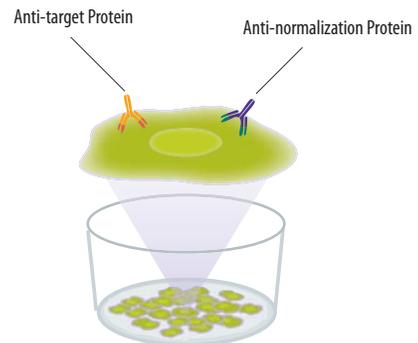
Cell-Based ELISA Assay Principle: Dual fluorescence assays to detect two proteins in whole cells within the same microplate well

Step 1



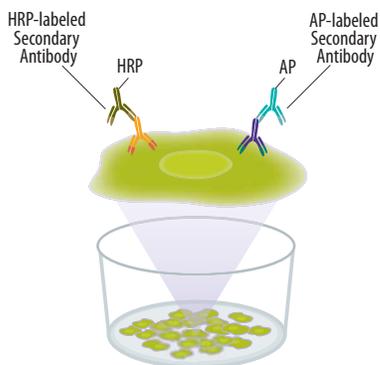
Cells are seeded into a 96-well plate, treated per the experimental protocol, fixed, permeabilized, blocked, and washed.

Step 2



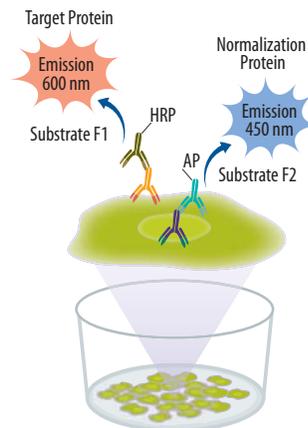
Primary antibodies from two different host species are added. One is specific for the target protein and one is specific for a normalization protein. Unbound antibody is washed away.

Step 3



Two species-specific secondary antibodies, labeled with either horseradish peroxidase (HRP) or alkaline phosphatase (AP), are used to detect the primary antibodies. Unbound secondary antibodies are washed away.

Step 4



Two spectrally distinct fluorogenic substrates for HRP or AP are used to simultaneously detect both the target and normalization proteins in the same microplate well. Fluorescence is measured with an excitation of 540 nm and emission at 600 nm for the F1 substrate (HRP-specific substrate). A second reading is taken with an excitation of 360 nm and emission at 450 nm for the F2 substrate (AP-specific substrate). Fluorescence of the target protein can be adjusted to the normalization protein to account for well-to-well variations.



ELISA Troubleshooting Guide

Poor Precision

Problem	Solution
Incomplete washing of the wells	Ensure that the wash apparatus is working properly. Do not reduce wash volume, the number of wash steps, or skip soak times.
Contamination	Saliva or skin may contain the analyte. Wear mask and gloves.
Inadequate aspiration of the wells	Wells should appear empty after aspiration. Blot plate on a clean paper towel after the last wash. Do not allow the wells to overdry.
Inadequate mixing of reagents in the wells	Ensure adequate mixing of reagents in the wells.
Unequal volumes added to the wells	Check pipette function, recalibrate if necessary. Ensure that the pipette tips are securely attached. Use consistent pipetting technique.
Pipetting error	Repeat the assay. Pipette standards and samples into the side of the wells to avoid splashing. Always run standards and samples in duplicate.
Reused pipette tips or reagent reservoirs	Change pipette tips between each standard, sample, or reagent. Use separate reservoirs for each reagent.
Reused plate sealer	Use a new plate sealer for each incubation period as recommended in the kit insert.

Inadequate Signal Development

Problem	Solution
Incorrect preparation of the substrate	Ensure that the correct volumes of substrate reagents are used and are mixed properly. If the substrate is lyophilized, reconstitute completely with the appropriate amount of diluent. Mix thoroughly and use within the time indicated.
Inadequate volume of substrate added to the wells	Check pipette function, recalibrate if necessary. Ensure that the pipette tips are securely attached. Use consistent pipetting technique.
Incorrect incubation times or temperatures	Adhere to the recommended incubation times and temperatures. Avoid incubating plates in areas where environmental conditions vary (e.g. under a vent or on a window sill). Time each plate individually to avoid over- or under-incubation.
Conjugate or substrate reagent failure	Check by mixing equal volumes of conjugate and substrate solution. Color should develop immediately. Store substrates in the dark prior to use.
Improper instrument settings	Ensure that the correct wavelength filters are used on the microplate reader. Ensure that the correct settings are used with the luminometer. Refer to the kit insert.
Read beyond the suggested reading window	Read within the time recommended in the kit insert.
No stop solution added	Follow the assay protocol in the kit insert.

Data Reduction

Problem	Solution
Improper data reduction method	Use the data reduction method recommended in the kit insert. Other reduction methods may give a less precise fit of the standard curve. If computer software is not available, plot the standard curve using log/log paper and apply regression analysis to the log transformation.
Standard curve not assayed	A separate standard curve must be run with each assay. The standard curve provided in the kit insert is for demonstration only and cannot be used to calculate results.

ELISA Troubleshooting Guide *continued*

Poor Standard Curve

Problem	Solution
Improper standard curve preparation	Ensure that the appropriate Calibrator Diluent is used. Reconstitute with the volume specified in the kit insert. Avoid foaming when mixing or reconstituting and allow the standard to sit for the specified time before use. Ensure accurate completion of the dilution series.
Incomplete washing of the wells	Ensure that the wash apparatus is working properly. Do not reduce the wash volume, the number of wash steps, or skip soak times.
Inadequate aspiration of the wells	Wells should appear empty after aspiration. Blot plate on a clean paper towel after the last wash. Do not allow the wells to overdry.
Unequal volumes added to the wells	Check pipette function, recalibrate if necessary. Ensure that the pipette tips are securely attached. Use consistent pipetting technique.
Substrates prepared too early	Prepare substrate(s) within the time recommended in the kit insert.
Read beyond suggested reading window	Read within the time recommended in the kit insert.
Improper data reduction method	Use the data reduction method recommended in the kit insert. Other reduction methods may give a less precise fit of the standard curve.
Pipetting error	Repeat the assay. Always run standards and samples in duplicate.

Unexpected Sample Values

Problem	Solution
Improper collection or storage	Use the collection method recommended in the kit insert. If not assaying samples immediately, refer to the kit insert for storage instructions.
Improper sample preparation	Sample preparation methods have been tested for optimal performance. Adhere to the recommended sample preparation instructions. Ensure that the correct Calibrator Diluent is used.

Drift

Problem	Solution
Interrupted assay set-up	Assay set-up should be continuous. Have all standards/samples prepared appropriately before commencement of the assay. Standards and samples should be added to the plate within 20 minutes unless indicated otherwise in the kit insert.
Incubation times and temperatures	Adhere to the recommended incubation times and temperatures. Avoid incubating plates in areas where environmental conditions vary (<i>e.g.</i> under a vent or window sill). Time each plate individually to avoid over- or under-incubation.
Reagents not at room temperature	Ensure that all reagents are at room temperature before pipetting into the wells unless otherwise instructed in the kit insert.
Incorrect luminometer settings	For chemiluminescent assays, read at ≤ 1.0 second/well. Reading at ≥ 2.0 seconds/well will produce a drift because of the time elapsed from the first wells read to the last wells read.

Edge Effect

Problem	Solution
Uneven temperatures around the work surface	Avoid incubating plates in areas where environmental conditions vary (<i>e.g.</i> under a vent or a window sill).
Evaporation	Ensure the plate sealer is properly adhered.
Stacked plates	Do not stack the plates during incubation.



Alphabetical Listing of ELISAs & References

α 1-Acid Glycoprotein

Quantikine Human α 1-Acid Glycoprotein ELISA Catalog # DAGP00

Sensitivity: 0.538 ng/mL
 Range: 3.13-200 ng/mL
 Sample Volume: 50 μ L
 Validated Sample Type(s): cell culture supernate, plasma (EDTA,heparin), serum, urine.

ACE/Angiotensin I Converting Enzyme/CD143

Quantikine Human ACE ELISA Catalog # DACE00

Sensitivity: 0.051 ng/mL
 Range: 0.78-50 ng/mL
 Sample Volume: 50 μ L
 Validated Sample Type(s): cell culture supernate, plasma (heparin), saliva, serum.
 Nielsen, H.M. *et al.* (2007) Soluble adhesion molecules and angiotensin-converting enzyme in dementia. *Neurobiol. Dis.* **26**:27.
Sample(s) Tested: human plasma.

Activin A

Quantikine Human/Mouse/Rat Activin A ELISA Catalog # DAC00B

Sensitivity: 7.85 pg/mL
 Range: 15.6-1000 pg/mL
 Sample Volume: 100 μ L
 Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.
 Zhang, Y-Q. *et al.* (2009) Upregulation of activin signaling in experimental colitis. *Am. J. Physiol. Gastrointest. Liver Physiol.* **297**:G768.
Sample(s) Tested: mouse plasma.

Adiponectin/Acrp30

Quantikine Human Adiponectin/Acrp30 ELISA Catalog # DRP300*

Sensitivity: 0.891 ng/mL
 Range: 3.9-250 ng/mL
 Sample Volume: 50 μ L
 Validated Sample Type(s): cell culture supernate, plasma (EDTA,heparin), serum.
 Gutman, G. *et al.* (2009) Recombinant luteinizing hormone induces increased production of ovarian follicular adiponectin *in vivo*: implications for enhanced insulin sensitivity. *Fertil. Steril.* **91**:1837.
Sample(s) Tested: human follicular fluid.
 Frankel, D.S. *et al.* (2009) Resistin, adiponectin, and risk of heart failure: the Framingham offspring study. *J. Am. Coll. Cardiol.* **53**:754.
Sample(s) Tested: human plasma.
 Shin, D.W. *et al.* (2009) (-)-Catechin promotes adipocyte differentiation in human bone marrow mesenchymal stem cells through PPAR γ transactivation. *Biochem. Pharmacol.* **77**:125.
Sample(s) Tested: human BM-MSC cell culture supernate.

Quantikine Mouse Adiponectin/Acrp30 ELISA Catalog # MRP300*

Sensitivity: 0.007 ng/mL
 Range: 0.16-10 ng/mL
 Sample Volume: 50 μ L
 Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenate.

Kuda, O. *et al.* (2009) N-3 fatty acids and rosiglitazone improve insulin sensitivity through additive stimulatory effects on muscle glycogen synthesis in mice fed a high-fat diet. *Diabetologia* **52**:941.

Sample(s) Tested: mouse plasma.

Wu, H.T. *et al.* (2009) Insulin resistance without obesity induced by cotton pellet granuloma in mice. *Lab. Invest.* **89**:362.

Sample(s) Tested: mouse serum.

Zhang, H. *et al.* (2009) Hydrangeic acid from the processed leaves of *Hydrangea macrophylla* var. thunbergii as a new type of anti-diabetic compound. *Eur. J. Pharmacol.* **606**:255.

Sample(s) Tested: 3T3-L1 mouse embryonic fibroblast cell culture supernate.

AgRP/Agouti-related Protein

Quantikine Human AgRP ELISA Catalog # DAGR00

Sensitivity: 2.68 pg/mL
 Range: 7.8-500 pg/mL
 Sample Volume: 50 μ L
 Validated Sample Type(s): cell culture supernate, plasma (EDTA,heparin), urine.

Akt

Cell-Based ELISA Human/Mouse/Rat Phospho-Akt (S473) Pan Specific Catalog # KCB887

Sample Volume: 100 μ L
 Validated Sample Type(s): whole cells.

Loos, T. *et al.* (2008) Citrullination of CXCL10 and CXCL11 by peptidylarginine deiminase: a naturally occurring posttranslational modification of chemokines and new dimension of immunoregulation. *Blood* **112**:2648.

Sample(s) Tested: human CXCR3a or CXCR7 transfected CHO cells.

Surveyor IC Human/Mouse/Rat Phospho-Akt (S473) Pan Specific ELISA Catalog # SUV887

Range: 0.31-20 ng/mL
 Sample Volume: 100 μ L
 Validated Sample Type(s): cell lysate.

Datta, D. *et al.* (2006) Ras-induced modulation of CXCL10 and its receptor splice variant CXCR3-B in MDA-MB-435 and MCF-7 cells: relevance for the development of human breast cancer. *Cancer Res.* **66**:9509.

Sample(s) Tested: MDA-MB-435 and MCF-7 human breast cancer cell lysates.

cAMP

Parameter Multi-species cAMP Assay

Catalog # **KGE002B***

Sensitivity: 8.57 pmol/mL

Range: 3.75-240 pmol/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, cell lysate, plasma (EDTA, heparin), saliva, serum, urine.

Albanesi, C. *et al.* (2009) Chemerin expression marks early psoriatic skin lesions and correlates with plasmacytoid dendritic cell recruitment. *J. Exp. Med.* **206**:249.

Sample(s) Tested: human psoriatic fibroblast cell culture supernate.

Angiogenin/ANG

Quantikine Human ANG ELISA

Catalog # **DAN00**

Sensitivity: 6 pg/mL

Range: 78.1-5000 pg/mL

Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Neuhoff, S. *et al.* (2007) Proliferation, differentiation, and cytokine secretion of human umbilical cord blood-derived mononuclear cells *in vitro*. *Exp. Hematol.* **35**:1119.

Sample(s) Tested: human umbilical cord blood-derived cell culture supernate.

Tello-Montoliu, A. *et al.* (2007) Plasma angiogenin levels in acute coronary syndromes: implications for prognosis. *Eur. Heart J.* **28**:3006.

Sample(s) Tested: human plasma (citrate).

Siebert, J. *et al.* (2007) Low serum angiogenin concentrations in patients with type 2 diabetes. *Diabetes Care* **30**:3086.

Sample(s) Tested: human serum.

Abdel-Rahman, A.M. *et al.* (2006) A comparative study of two angiogenic factors: vascular endothelial growth factor and angiogenin in induced sputum from asthmatic children in acute attack. *Chest* **129**:266.

Sample(s) Tested: human saliva.

Angiopoietin-1

Quantikine Human Angiopoietin-1 ELISA

Catalog # **DANG10**

Sensitivity: 10.3 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (citrate, EDTA, heparin), platelet lysates, saliva, serum.

Yuan, H.T. *et al.* (2009) Angiopoietin-2 is a partial agonist/antagonist of Tie2 signaling in the endothelium. *Mol. Cell. Biol.* **29**:2011.

Sample(s) Tested: human umbilical vein endothelial cell culture supernate.

Shim, W.S. *et al.* (2008) Structural stability of neoangiogenic intramyocardial microvessels supports functional recovery in chronic ischemic myocardium. *J. Mol. Cell. Cardiol.* **45**:70.

Sample(s) Tested: homogenized porcine myocardial tissue.

Kanazawa, H. *et al.* (2007) Angiopoietin-2 as a contributing factor of exercise-induced bronchoconstriction in asthmatic patients receiving inhaled corticosteroid therapy. *J. Allergy Clin. Immunol.* **121**:390.

Sample(s) Tested: human sputum.

Angiopoietin-2

Quantikine Human Angiopoietin-2 ELISA

Catalog # **DANG20***

Sensitivity: 21.3 pg/mL

Range: 46.9-3000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.

Reiss, Y. *et al.* (2009) Switching of vascular phenotypes within a murine breast cancer model induced by angiopoietin-2. *J. Pathol.* **217**:571.

Sample(s) Tested: cell culture supernates from M6363 and M6378 mouse mammary carcinoma cell lines transfected with human Ang-2.

Hatfield, K. *et al.* (2009) Primary human acute myeloid leukemia cells increase the proliferation of microvascular endothelial cells through the release of soluble mediators. *Br. J. Haematol.* **144**:53.

Sample(s) Tested: human acute myeloid leukemia cell culture supernate.

Helfrich, I. *et al.* (2009) Angiopoietin-2 levels are associated with disease progression in metastatic malignant melanoma. *Clin. Cancer Res.* **15**:1384.

Sample(s) Tested: MA-MEL-48a, MA-MEL-141b, MA-MEL-142, and A375 human melanoma cell culture supernates, human serum.

Yeo, T.W. *et al.* (2008) Angiopoietin-2 is associated with decreased endothelial nitric oxide and poor clinical outcome in severe falciparum malaria. *Proc. Natl. Acad. Sci. U.S.A.* **105**:17097.

Sample(s) Tested: human plasma.

Angiopoietin-like 3

Quantikine Mouse Angiopoietin-like 3 ELISA

Catalog # **MANL30**

Sensitivity: 9.62 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

BAFF/BlyS/TNFSF13B

Quantikine Human BAFF/BlyS/TNFSF13B ELISA

Catalog # **DBLYS0***

Sensitivity: 6.67 pg/mL (cell culture supernate), 11.9 pg/mL (serum/plasma)

Range: 31.2-2000 pg/mL (cell culture supernate), 62.5-4000 pg/mL (serum/plasma)

Sample Volume: 75 µL (cell culture supernate), 50 µL (serum/plasma)

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Takeda, T. *et al.* (2009) Elevation of B cell-activating factor belonging to the tumour necrosis factor [corrected] family (BAFF) in haemophilia A patients with inhibitor. *Thromb. Haemost.* **101**:408.

Sample(s) Tested: human plasma (citrate).

Molica, S. *et al.* (2009) Increased serum BAFF (B cell-activating factor of the TNF family) level is a peculiar feature associated with familial chronic lymphocytic leukemia. *Leuk. Res.* **33**:162.

Sample(s) Tested: human serum.

Kato, A. *et al.* (2008) Evidence of a role for B cell-activating factor of the TNF family in the pathogenesis of chronic rhinosinusitis with nasal polyps. *J. Allergy Clin. Immunol.* **121**:1385.

Sample(s) Tested: homogenized human nasal polyp and inferior turbinate tissue, human nasal lavage.

**Quantikine Mouse BAFF/BLyS/TNFSF13B ELISA**Catalog # **MBLY50**

Sensitivity: 7.8 pg/mL

Range: 46.9-3000 pg/mL

Sample Volume: 40 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

El Shikh, M.E. *et al.* (2009) T-independent antibody responses to T-dependent antigens: a novel follicular dendritic cell-dependent activity. *J. Immunol.* **182**:3482.*Sample(s) Tested*: mouse follicular dendritic cell culture supernate.Kahn, P. *et al.* (2008) Prevention of murine antiphospholipid syndrome by BAFF blockade. *Arthritis Rheum.* **58**:2824.*Sample(s) Tested*: mouse serum.**BDNF****Quantikine Human BDNF ELISA**Catalog # **DBD00***

Sensitivity: 20 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (citrate, EDTA, heparin), serum.

Sung, S.Y. *et al.* (2008) Coevolution of prostate cancer and bone stroma in three-dimensional coculture: implications for cancer growth and metastasis. *Cancer Res.* **68**:9996.*Sample(s) Tested*: human serum.Wong-Goodrich, S.J. *et al.* (2008) Prenatal choline supplementation attenuates neuropathological response to status epilepticus in the adult rat hippocampus. *Neurobiol. Dis.* **30**:255.*Sample(s) Tested*: homogenized rat hippocampal tissue.Lockhart, B.P. *et al.* (2007) S18986: a positive modulator of AMPA-receptors enhances (S)-AMPA-mediated BDNF mRNA and protein expression in rat primary cortical neuronal cultures. *Eur. J. Pharmacol.* **561**:23.*Sample(s) Tested*: rat primary cortical neuron cell culture supernate.**BMP-2****Quantikine Human/Mouse/Rat BMP-2 ELISA**Catalog # **DBP200***

Sensitivity: 29 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): bone tissue extract, cell culture supernate.

Korf-Klingebiel, M. *et al.* (2008) Bone marrow cells are a rich source of growth factors and cytokines: implications for cell therapy trials after myocardial infarction. *Eur. Heart J.* **29**:2851.*Sample(s) Tested*: human bone marrow cell culture supernates.Virk, M.S. *et al.* (2008) Influence of short-term adenoviral vector and prolonged lentiviral vector mediated bone morphogenetic protein-2 expression on the quality of bone repair in a rat femoral defect model. *Bone* **42**:921.*Sample(s) Tested*: rat bone marrow cell lysates.Maire, M. *et al.* (2005) Bovine BMP osteoinductive potential enhanced by functionalized dextran-derived hydrogels. *Biomaterials* **26**:5085.*Sample(s) Tested*: hydrogel supernate containing recombinant human BMP-2.**BMP-4****Quantikine Human BMP-4 ELISA**Catalog # **DBP400**

Sensitivity: 3.68 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): bone tissue extract, cell culture supernate.

Sorrentino, A. *et al.* (2008) Isolation and characterization of CD146⁺ multipotent mesenchymal stromal cells. *Exp. Hematol.* **36**:1035.*Sample(s) Tested*: human mesenchymal stromal cell culture supernate.Savarino, L. *et al.* (2007) The performance of poly(ϵ -caprolactone) scaffolds in a rabbit femur model with and without autologous stromal cells and BMP4. *Biomaterials* **28**:3101.*Sample(s) Tested*: cell culture supernates from rabbit bone marrow-derived stromal cells transfected with human BMP-4.**BMP-7****Quantikine Human BMP-7 ELISA**Catalog # **DBP700**

Sensitivity: 7.83 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): bone tissue extract, cell culture supernate, plasma (EDTA, heparin), serum, urine.

Notting, I. *et al.* (2007) Bone morphogenetic protein 7 inhibits tumor growth of human uveal melanoma *in vivo*. *Invest. Ophthalmol. Vis. Sci.* **48**:4882.*Sample(s) Tested*: cell culture supernates from OCM-1 FRT human uveal melanoma cells overexpressing BMP-7.Buijs, J.T. *et al.* (2007) Bone morphogenetic protein 7 in the development and treatment of bone metastases from breast cancer. *Cancer Res.* **67**:8742.*Sample(s) Tested*: MDA-231-B human breast cancer cell culture supernate.Zhang, Y. *et al.* (2007) Combination of scaffold and adenovirus vectors expressing bone morphogenetic protein-7 for alveolar bone regeneration at dental implant defects. *Biomaterials* **28**:4635.*Sample(s) Tested*: human periodontal ligament cell culture supernate.Tacke, F. *et al.* (2007) Bone morphogenetic protein 7 is elevated in patients with chronic liver disease and exerts fibrogenic effects on human hepatic stellate cells. *Dig. Dis. Sci.* **52**:3404.*Sample(s) Tested*: human plasma.**E-Cadherin****Quantikine Human E-Cadherin ELISA**Catalog # **DCADE0**

Sensitivity: 0.09 ng/mL

Range: 0.31-20 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), saliva, serum, urine.

Jonsson, M. V. *et al.* (2005) Elevated serum levels of soluble E-Cadherin in patients with primary Sjögren's syndrome. *Scand. J. Immunol.* **62**:552.*Sample(s) Tested*: human serum.

Carbonic Anhydrase IX/CA9

Quantikine Human Carbonic Anhydrase IX/CA9 ELISA Catalog # DCA900

Sensitivity: 4.39 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.

Tanaka, N. *et al.* (2008) Expression of carbonic anhydrase 9, a potential intrinsic marker of hypoxia, is associated with poor prognosis in oesophageal squamous cell carcinoma. *Br. J. Cancer* **99**:1468.

Sample(s) Tested: TE-2 and CHEK-1 human oesophageal carcinoma cell culture supernates.

Caspase-1/ICE

Quantikine Human Caspase-1 ELISA Catalog # DCA100

Sensitivity: 1.24 pg/mL

Range: 6.25-400 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate.

Kuijk, L.M. *et al.* (2008) HMG-CoA reductase inhibition induces IL-1 β release through Rac1/PI3K/PKB-dependent caspase-1 activation. *Blood* **112**:3563.

Sample(s) Tested: THP-1 human acute monocytic leukemia cell culture supernate.

Blankenberg, S. *et al.* (2006) Halotypes of the caspase-1 gene, plasma caspase-1 levels, and cardiovascular risk. *Circ. Res.* **99**:102.

Sample(s) Tested: human plasma.

Grandjean-Laquerriere, A. *et al.* (2004) The effect of the physical characteristics of hydroxyapatite particles on human monocytes IL-18 production *in vitro*. *Biomaterials* **25**:5921.

Sample(s) Tested: human monocytic cell culture supernate.

Dziankowska-Bartkowiak, B. *et al.* (2003) Evaluation of caspase 1 and sFas serum levels in patients with systemic sclerosis: correlation with lung dysfunction, joint and bone involvement. *Mediators Inflamm.* **12**:339.

Sample(s) Tested: human serum.

Caspase-3

Quantikine Human Active Caspase-3 ELISA Catalog # KM300

Sensitivity: 0.1 ng/mL

Range: 0.31-20 ng/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell extract.

Kim, R.H. *et al.* (2009) Arginine deiminase as a novel therapy for prostate cancer induces autophagy and caspase-independent apoptosis. *Cancer Res.* **69**:700.

Sample(s) Tested: CWR22Rv1 human prostate cancer cell lysates.

Bowles, T.L. *et al.* (2008) Pancreatic cancer cell lines deficient in argininosuccinate synthetase are sensitive to arginine deprivation by arginine deiminase. *Int. J. Cancer* **123**:1950.

Sample(s) Tested: MIA-PaCa-2 and L3.3 human pancreatic cancer cell culture supernates.

Marfella, R. *et al.* (2006) The vascular smooth muscle cells apoptosis in asymptomatic diabetic carotid plaques: role of glycemic control. *J. Am. Coll. Cardiol.* **47**:2118.

Sample(s) Tested: homogenized human atherosclerotic plaque tissue.

Stevens, M. *et al.* (2006) Pyridine N-oxide derivatives inhibit viral transactivation by interfering with NF- κ B binding. *Biochem. Pharmacol.* **71**:1122.

Sample(s) Tested: Jurkat human acute T cell leukemia cell lysates.

β -Catenin

Surveyor IC Human Total β -Catenin ELISA Catalog # SUV1329

Range: 312.5-20000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell lysate.

Cathepsin B

Quantikine Human Pro-Cathepsin B ELISA Catalog # DCATBO

Sensitivity: 0.079 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, cell lysate, plasma (heparin), saliva, serum, urine.

Tsai, H.T. *et al.* (2009) Imbalanced serum concentration between cathepsin B and cystatin C in patients with pelvic inflammatory disease. *Fertil. Steril.* **91**:549.

Sample(s) Tested: human serum.

Elsaid, K.A. *et al.* (2008) Decreased lubricin concentrations and markers of joint inflammation in the synovial fluid of patients with anterior cruciate ligament injury. *Arthritis Rheum.* **58**:1707.

Sample(s) Tested: human synovial fluid.

Potapova, I.A. *et al.* (2007) Mesenchymal stem cells support migration, extracellular matrix invasion, proliferation, and survival of endothelial cells *in vitro*. *Stem Cells* **25**:1761.

Sample(s) Tested: human mesenchymal stem cell culture supernate.

Cathepsin V

Quantikine Human Cathepsin V ELISA Catalog # DCATVO

Sensitivity: 7.14 pg/mL

Range: 31.25-2000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

CCL2/MCP-1

Quantikine Canine CCL2/MCP-1 ELISA Catalog # CACP00

Sensitivity: 10.8 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

**Quantikine Human CCL2/MCP-1 ELISA**Catalog # **DCP00***

Sensitivity: 5 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.

Trøseid, M. *et al.* (2009) Interleukin-18 is a strong predictor of cardiovascular events in elderly men with the metabolic syndrome: synergistic effect of inflammation and hyperglycemia. *Diabetes Care* **32**:486.

Sample(s) Tested: human plasma (citrate).

Zehnder, D. *et al.* (2008) Reduction of the vitamin D hormonal system in kidney disease is associated with increased renal inflammation. *Kidney Int.* **74**:1343.

Sample(s) Tested: human urine, human proximal tubular epithelial cell culture supernate.

Ko, F.W.S. *et al.* (2006) Exhaled breath condensate levels of 8-isoprostane, growth related oncogene α and monocyte chemoattractant protein-1 in patients with chronic obstructive pulmonary disease. *Resp. Med.* **100**:630.

Sample(s) Tested: human exhaled breath concentrate.

Yang, S-K. *et al.* (2002) The increased expression of an array of C-X-C and C-C chemokines in the mucosa of patients with ulcerative colitis: regulation by corticosteroids. *Am. J. Gastroenterol.* **97**:126.

Sample(s) Tested: human colonoscopic mucosal biopsy cell culture supernate.

Zink, M.C. *et al.* (2001) Increased macrophage chemoattractant protein-1 in cerebrospinal fluid precedes and predicts simian immunodeficiency virus encephalitis. *J. Infect. Dis.* **184**:1015.

Sample(s) Tested: rhesus macaque plasma, rhesus macaque CSF.

Quantikine Mouse CCL2/JE/MCP-1 ELISACatalog # **MJE00***

Sensitivity: 2 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum.

Yang, S.J. *et al.* (2009) Inhibition of the chemokine (C-C motif) ligand 2/chemokine (C-C motif) receptor 2 pathway attenuates hyperglycaemia and inflammation in a mouse model of hepatic steatosis and lipotrophy. *Diabetologia* **52**:972.

Sample(s) Tested: mouse serum, homogenized mouse liver tissue.

Gao, Y.J. *et al.* (2009) JNK-induced MCP-1 production in spinal cord astrocytes contributes to central sensitization and neuropathic pain. *J. Neurosci.* **29**:4096.

Sample(s) Tested: mouse astrocyte cell lysates and cell culture supernates, homogenized mouse spinal cord tissue.

Ryman-Rasmussen, J.P. *et al.* (2009) Inhaled multiwalled carbon nanotubes potentiate airway fibrosis in murine allergic asthma. *Am. J. Respir. Cell Mol. Biol.* **40**:349.

Sample(s) Tested: mouse BALF.

Stathopoulos, G.T. *et al.* (2006) Nuclear factor- κ B affects tumor progression in a mouse model of malignant pleural effusion. *Am. J. Respir. Cell Mol. Biol.* **34**:142.

Sample(s) Tested: mouse serum, mouse pleural fluid.

CCL3/MIP-1 α **Quantikine Human CCL3/MIP-1 α ELISA**Catalog # **DMA00***

Sensitivity: 10 pg/mL

Range: 31.2-1000 pg/mL (cell culture supernate), 46.9-1500 pg/mL (serum/plasma)

Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Fauce, S.R. *et al.* (2008) Telomerase-based pharmacologic enhancement of antiviral function of human CD8⁺ T lymphocytes. *J. Immunol.* **181**:7400.

Sample(s) Tested: human CD8⁺ T cell culture supernate.

Pokkali, S. *et al.* (2008) Expression of CXC and CC type of chemokines and its receptors in tuberculous and non-tuberculous effusions. *Cytokine* **41**:307.

Sample(s) Tested: human serum, human pleural effusion.

Ng, S.W. *et al.* (2007) Role of preprotachykinin-A gene products on multiple organ injury in LPS-induced endotoxemia. *J. Leukoc. Biol.* **83**:288.

Sample(s) Tested: homogenized human lung, liver, and kidney tissue.

Kang, M.J. *et al.* (2007) IL-18 is induced and IL-18 receptor α plays a critical role in the pathogenesis of cigarette smoke-induced pulmonary emphysema and inflammation. *J. Immunol.* **178**:1948.

Sample(s) Tested: human BALF.

Hurst, S.M. *et al.* (2001) IL-6 and its soluble receptor orchestrate a temporal switch in the pattern of leukocyte recruitment seen during acute inflammation. *Immunity* **14**:705.

Sample(s) Tested: human peritoneal mesothelial cell culture supernate.

Quantikine Mouse CCL3/MIP-1 α ELISACatalog # **MMA00***

Sensitivity: 1.5 pg/mL

Range: 4.7-300 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum.

Bem, R.A. *et al.* (2009) Mechanical ventilation enhances lung inflammation and caspase activity in a model of mouse pneumovirus infection. *Am. J. Physiol. Lung Cell Mol. Physiol.* **296**:L46.

Sample(s) Tested: mouse BALF.

Mabley, J.G. *et al.* (2008) The novel inosine analogue, INO-2002, protects against diabetes development in multiple low-dose streptozotocin and non-obese diabetic mouse models of type I diabetes. *J. Endocrinol.* **198**:581.

Sample(s) Tested: homogenized mouse pancreas tissue.

Rittirsch, D. *et al.* (2008) Functional roles for C5a receptors in sepsis. *Nat. Med.* **14**:551.

Sample(s) Tested: mouse plasma (citrate).

Domachowski, J.B. *et al.* (2000) Pulmonary eosinophilia and production of MIP-1 α are prominent responses to infection with pneumonia virus of mice. *Cell. Immunol.* **200**:98.

Sample(s) Tested: mouse BALF.

CCL4/MIP-1 β **Quantikine Human CCL4/MIP-1 β ELISA**Catalog # **DMB00***

Sensitivity: 4 pg/mL (cell culture supernate), 11 pg/mL (serum/plasma)
 Range: 15.6-1000 pg/mL (cell culture supernate), 31.2-2000 pg/mL (serum/plasma)
 Sample Volume: 200 μ L (cell culture supernate), 150 μ L (serum/plasma)
 Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Hartl, D. *et al.* (2008) Infiltrated neutrophils acquire novel chemokine receptor expression and chemokine responsiveness in chronic inflammatory lung diseases. *J. Immunol.* **181**:8053.

Sample(s) Tested: human BALF, human synovial fluid.

Kristjansson, J. *et al.* (2005) Respiratory syncytial virus and other respiratory viruses during the first 3 months of life promote a local TH2-like response. *J. Allergy Clin. Immunol.* **116**:805.

Sample(s) Tested: human nasopharyngeal secretions.

Yang, S-K. *et al.* (2002) The increased expression of an array of C-X-C and C-C chemokines in the mucosa of patients with ulcerative colitis: regulation by corticosteroids. *Am. J. Gastroenterol.* **97**:126.

Sample(s) Tested: human colonoscopic mucosal biopsy cell culture supernate.

Lehner, T. *et al.* (2000) Up-regulation of β -chemokines and down-modulation of CCR5 co-receptors inhibit simian immunodeficiency virus transmission in non-human primates. *Immunology* **99**:569.

Sample(s) Tested: rhesus macaque CD8⁺T cell culture supernate.

Quantikine Mouse CCL4/MIP-1 β ELISACatalog # **MMB00**

Sensitivity: 3 pg/mL
 Range: 7.8-500 pg/mL
 Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Di Liberto, D. *et al.* (2008) Role of the chemokine decoy receptor D6 in balancing inflammation, immune activation, and antimicrobial resistance in *Mycobacterium tuberculosis* infection. *J. Exp. Med.* **205**:2075.

Sample(s) Tested: mouse serum, mouse BALF.

Bátkai, S. *et al.* (2007) Cannabinoid-2 receptor mediates protection against hepatic ischemia/reperfusion injury. *FASEB J.* **21**:1788.

Sample(s) Tested: homogenized mouse liver tissue, mouse serum.

Trabattoni, D. *et al.* (2006) Immunization with gp120-depleted whole killed HIV immunogen and a second-generation CpG DNA elicits strong HIV-specific responses in mice. *Vaccine* **24**:1470.

Sample(s) Tested: mouse splenocyte cell culture supernate.

CCL5/RANTES**Quantikine Human CCL5/RANTES ELISA**Catalog # **DRN00B***

Sensitivity: 6.6 pg/mL
 Range: 31.2-2000 pg/mL
 Sample Volume: 100 μ L
 Validated Sample Type(s): cell culture supernate, platelet-poor plasma (citrate, EDTA, heparin), serum, urine.

Renaud, S.J. *et al.* (2009) Tumour necrosis factor α stimulates the production of monocyte chemoattractants by extravillous trophoblast cells via differential activation of MAPK pathways. *Placenta* **30**:313.

Sample(s) Tested: HTR-8/SVneo human first trimester cytotrophoblast cell culture supernate.

Lee, Y.R. *et al.* (2009) Inhibition of IL-1 β -mediated inflammatory responses by the I κ B- α super-repressor in human fibroblast-like synoviocytes. *Biochem. Biophys. Res. Commun.* **378**:90.

Sample(s) Tested: human fibroblast-like synoviocytes cell culture supernate.

Sung, S.Y. *et al.* (2008) Coevolution of prostate cancer and bone stroma in three-dimensional coculture: implications for cancer growth and metastasis. *Cancer Res.* **68**:9996.

Sample(s) Tested: human serum.

Zietkowski, Z. *et al.* (2008) RANTES in exhaled breath condensate of stable and unstable asthma patients. *Cell Stem Cell* **102**:1198.

Sample(s) Tested: human exhaled breath condensate.

Panzer, U. *et al.* (2004) CXCR3 and CCR5 positive T cell recruitment in acute human renal allograft rejection. *Transplantation* **78**:1341.

Sample(s) Tested: human urine.

Quantikine Mouse CCL5/RANTES ELISACatalog # **MMR00**

Sensitivity: 2 pg/mL
 Range: 7.8-500 pg/mL
 Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA), serum.

Shinagawa, K. *et al.* (2009) A severe deficiency of coagulation factor VIIa results in attenuation of the asthmatic response in mice. *Am. J. Physiol. Lung Cell Mol. Physiol.* **296**:L763.

Sample(s) Tested: mouse BALF.

Kharabi Masouleh, B. *et al.* (2009) Role of the heparan sulfate proteoglycan syndecan-1 (CD138) in delayed-type hypersensitivity. *J. Immunol.* **182**:4985.

Sample(s) Tested: homogenized mouse ear tissue.

Hirota, Y. *et al.* (2008) Deficiency of immunophilin FKBP52 promotes endometriosis. *Am. J. Pathol.* **173**:1747.

Sample(s) Tested: mouse peritoneal fluid.



CCL7/MCP-3

Quantikine Human CCL7/MCP-3 ELISA

Catalog # **DCC700**

Sensitivity: 8.52 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Ingvarsson, J. *et al.* (2008) Detection of pancreatic cancer using antibody microarray-based serum protein profiling. *Proteomics* **8**:2211.

Sample(s) Tested: human serum.

Kang, M.J. *et al.* (2007) IL-18 is induced and IL-18 receptor α plays a critical role in the pathogenesis of cigarette smoke-induced pulmonary emphysema and inflammation. *J. Immunol.* **178**:1948.

Sample(s) Tested: human BALF.

Skoberne, M. *et al.* (2006) The apoptotic-cell receptor CR3, but not $\alpha\text{v}\beta 5$, is a regulator of human dendritic-cell immunostimulatory function. *Blood* **108**:947.

Sample(s) Tested: human dendritic cell culture supernate.

Larsson, M. *et al.* (2004) Lack of phenotypic and functional impairment in dendritic cells from chimpanzees chronically infected with hepatitis C virus. *J. Virol.* **78**:6151.

Sample(s) Tested: chimpanzee dendritic cell culture supernate.

CCL11/Eotaxin

Quantikine Human CCL11/Eotaxin ELISA

Catalog # **DTX00***

Sensitivity: 5 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA), serum.

Hartl, D. *et al.* (2008) Infiltrated neutrophils acquire novel chemokine receptor expression and chemokine responsiveness in chronic inflammatory lung diseases. *J. Immunol.* **181**:8053.

Sample(s) Tested: human BALF, human synovial fluid.

Zhang, N. *et al.* (2008) Different types of T-effector cells orchestrate mucosal inflammation in chronic sinus disease. *J. Allergy Clin. Immunol.* **122**:961.

Sample(s) Tested: homogenized human nasal polyp tissue.

Makowska, J.S. *et al.* (2007) Systemic responses after bronchial aspirin challenge in sensitive patients with asthma. *J. Allergy Clin. Immunol.* **121**:348.

Sample(s) Tested: human serum.

Intapan, P.M. *et al.* (2007) Cerebrospinal fluid eotaxin and eotaxin-2 levels in human eosinophilic meningitis associated with angiostrongyliasis. *Cytokine* **39**:138.

Sample(s) Tested: human CSF.

Kristjansson, J. *et al.* (2005) Respiratory syncytial virus and other respiratory viruses during the first 3 months of life promote a local TH2-like response. *J. Allergy Clin. Immunol.* **116**:805.

Sample(s) Tested: human nasopharyngeal secretions.

Quantikine Mouse CCL11/Eotaxin ELISA

Catalog # **MME00**

Sensitivity: 3 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA), serum.

Shinagawa, K. *et al.* (2009) A severe deficiency of coagulation factor VIIa results in attenuation of the asthmatic response in mice. *Am. J. Physiol. Lung Cell Mol. Physiol.* **296**:L763.

Sample(s) Tested: mouse BALF.

Miyazaki, D. *et al.* (2009) Ablation of type I hypersensitivity in experimental allergic conjunctivitis by eotaxin-1/CCR3 blockade. *Int. Immunol.* **21**:187.

Sample(s) Tested: mouse conjunctival tissue cell culture supernate.

Di Liberto, D. *et al.* (2008) Role of the chemokine decoy receptor D6 in balancing inflammation, immune activation, and antimicrobial resistance in *Mycobacterium tuberculosis* infection. *J. Exp. Med.* **205**:2075.

Sample(s) Tested: mouse serum, mouse BALF.

CCL12/MCP-5

Quantikine Mouse CCL12/MCP-5 ELISA

Catalog # **MCC120**

Sensitivity: 2.1 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Shireman, P.K. *et al.* (2007) MCP-1 deficiency causes altered inflammation with impaired skeletal muscle regeneration. *J. Leukoc. Biol.* **81**:775.

Sample(s) Tested: homogenized mouse muscle tissue.

Weighardt, H. *et al.* (2006) Type I IFN modulates host defense and late hyperinflammation in septic peritonitis. *J. Immunol.* **177**:5623.

Sample(s) Tested: mouse peritoneal lavage, mouse serum, homogenized mouse liver and spleen tissue.

Stathopoulos, G.T. *et al.* (2005) Nuclear factor- κ B affects tumor progression in a mouse model of malignant pleural effusion. *Am. J. Respir. Cell Mol. Biol.* **34**:142.

Sample(s) Tested: mouse pleural effusion.

CCL17/TARC

Quantikine Human CCL17/TARC ELISA

Catalog # **DDN00***

Sensitivity: 7 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Qin, X.J. *et al.* (2009) CCL22 recruits CD4-positive CD25-positive regulatory T cells into malignant pleural effusion. *Clin. Cancer Res.* **15**:2231.

Sample(s) Tested: human pleural fluid, human serum.

Rautert, R. *et al.* (2008) Elevated pretreatment interleukin-10 serum level is an International Prognostic Score (IPS)-independent risk factor for early treatment failure in advanced stage Hodgkin lymphoma. *Leuk. Lymphoma* **49**:2091.

Sample(s) Tested: human serum.

CCL17/TARC continued

Olsnes, A.M. *et al.* (2008) *In vitro* induction of a dendritic cell phenotype in primary human acute myelogenous leukemia (AML) blasts alters the chemokine release profile and increases the levels of T cell chemotactic CCL17 and CCL22. *J. Interferon Cytokine Res.* **28**:297.

Sample(s) Tested: human acute myelogenous leukemia cell culture supernate.

Ma, Y. *et al.* (2007) Proteomics analysis of Hodgkin lymphoma: identification of new players involved in the cross-talk between HRS cells and infiltrating lymphocytes. *Blood* **111**:2339.

Sample(s) Tested: human plasma, L428 human glandular bud epithelial cell, L1236 human Hodgkin's lymphoma cell, and KM-H2 human prostate cancer cell culture supernates.

Quantikine Mouse CCL17/TARC ELISACatalog # **MCC170**

Sensitivity: 5 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Medoff, B.D. *et al.* (2009) CD11b⁺ myeloid cells are the key mediators of Th2 cell homing into the airway in allergic inflammation. *J. Immunol.* **182**:623.

Sample(s) Tested: mouse BALF.

Zhou, W. *et al.* (2008) Cyclooxygenase inhibition during allergic sensitization increases STAT6-independent primary and memory Th2 responses. *J. Immunol.* **181**:5360.

Sample(s) Tested: homogenized mouse spleen tissue.

Voskas, D. *et al.* (2008) An eosinophil immune response characterizes the inflammatory skin disease observed in Tie-2 transgenic mice. *J. Leukoc. Biol.* **84**:59.

Sample(s) Tested: mouse serum.

CCL20/MIP-3 α **Quantikine Human CCL20/MIP-3 α ELISA**Catalog # **DM3A00**

Sensitivity: 0.87 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Zrioual, S. *et al.* (2009) Genome-wide comparison between IL-17A- and IL-17F-induced effects in human rheumatoid arthritis synoviocytes. *J. Immunol.* **182**:3112.

Sample(s) Tested: human synoviocytes cell culture supernate.

Peng, W. *et al.* (2008) Urinary fractalkine is a marker of acute rejection. *Kidney Int.* **74**:1454.

Sample(s) Tested: human urine.

Chang, K.P. *et al.* (2008) Macrophage inflammatory protein-3 α is a novel serum marker for nasopharyngeal carcinoma detection and prediction of treatment outcomes. *Clin. Cancer Res.* **14**:6979.

Sample(s) Tested: human serum.

Wang, D. *et al.* (2008) Evidence for a pathogenetic role of interleukin-18 in cutaneous lupus erythematosus. *Arthritis Rheum.* **58**:3205.

Sample(s) Tested: human keratinocytes cell culture supernate.

Moller, A.S. *et al.* (2005) Chemokine production and pattern recognition receptor (PRR) expression in whole blood stimulated with pathogen-associated molecular patterns (PAMPs). *Cytokine* **32**:304.

Sample(s) Tested: human plasma (heparin).

Quantikine Mouse CCL20/MIP-3 α ELISACatalog # **MCC200**

Sensitivity: 0.49 pg/mL

Range: 3.9-250 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.

Cho, Y.S. *et al.* (2008) Tyrosine phosphatase SHP-1 in oxidative stress and development of allergic airway inflammation. *Am. J. Respir. Cell Mol. Biol.* **39**:412.

Sample(s) Tested: mouse BALF.

Wang, L. *et al.* (2007) TLR4 signaling in cancer cells promotes chemoattraction of immature dendritic cells via autocrine CCL20. *Biochem. Biophys. Res. Commun.* **366**:852.

Sample(s) Tested: CT-26 mouse colon cancer cell culture supernate.

CCL21/6Ckine**Quantikine Human CCL21/6Ckine ELISA**Catalog # **D6C00**

Sensitivity: 33.5 pg/mL

Range: 78.1-5000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Huang, V. *et al.* (2008) Cutting edge: rapid accumulation of epidermal CCL27 in skin-draining lymph nodes following topical application of a contact sensitizer recruits CCR10-expressing T cells. *J. Immunol.* **180**:6462.

Sample(s) Tested: human serum, human lymphatic fluid.

Shields, J.D. *et al.* (2007) Autologous chemotaxis as a mechanism of tumor cell homing to lymphatics via interstitial flow and autocrine CCR7 signaling. *Cancer Cell* **11**:526.

Sample(s) Tested: human lymphatic endothelial cell, MCF10A non-tumorigenic breast cell, MCF-7 and MDA breast cancer cell culture supernates.

Haukeland, J.W. *et al.* (2006) Systemic inflammation in nonalcoholic fatty liver disease is characterized by elevated levels of CCL2. *J. Hepatol.* **44**:1167.

Sample(s) Tested: human serum.

CCL22/MDC**Quantikine Human CCL22/MDC ELISA**Catalog # **DMD00**

Sensitivity: 62.5 pg/mL

Range: 125-4000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Qin, X.J. *et al.* (2009) CCL22 recruits CD4-positive CD25-positive regulatory T cells into malignant pleural effusion. *Clin. Cancer Res.* **15**:2231.

Sample(s) Tested: human serum, human pleural fluid.

Hung, C.H. *et al.* (2008) Effects of formoterol and salmeterol on the production of Th1- and Th2-related chemokines by monocytes and bronchial epithelial cells. *Eur. Respir. J.* **31**:1313.

Sample(s) Tested: THP-1 human acute monocytic leukemia cell culture supernate.

Hieshima, K. *et al.* (2008) Tax-inducible production of CC chemokine ligand 22 by human T cell leukemia virus type 1 (HTLV-1)-infected T cells promotes preferential transmission of HTLV-1 to CCR4-expressing CD4⁺ T cells. *J. Immunol.* **180**:931.

Sample(s) Tested: C8166, C91/PL, ILT8M2, TCL-Kan human HTLV-1 transformed T cell line, KOB, KK1, ST1, and S04 human ATL-derived T cell culture supernates.



Thompson, S.D. *et al.* (2001) Chemokine receptor CCR4 on CD4⁺ T cells in juvenile rheumatoid arthritis synovial fluid defines a subset of cells with increased IL-4:IFN- γ mRNA ratios. *J. Immunol.* **166**:6899.

Sample(s) Tested: human plasma, human synovial fluid.

Quantikine Mouse CCL22/MDC ELISA

Catalog # **MCC220**

Sensitivity: 1.8 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Medoff, B.D. *et al.* (2009) CD11b⁺ myeloid cells are the key mediators of Th2 cell homing into the airway in allergic inflammation. *J. Immunol.* **182**:623.

Sample(s) Tested: mouse BALF.

Di Liberto, D. *et al.* (2008) Role of the chemokine decoy receptor D6 in balancing inflammation, immune activation, and antimicrobial resistance in *Mycobacterium tuberculosis* infection. *J. Exp. Med.* **205**:2075.

Sample(s) Tested: mouse serum, mouse BALF.

Trujillo, G. *et al.* (2008) A novel mechanism for CCR4 in the regulation of macrophage activation in bleomycin-induced pulmonary fibrosis. *Am. J. Pathol.* **172**:1209.

Sample(s) Tested: homogenized mouse lung tissue.

CCL24/Eotaxin-2/MPIF-2

Quantikine Human CCL24/Eotaxin-2 ELISA

Catalog # **DCC240B**

Sensitivity: 14.3 pg/mL

Range: 78-5000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Taka, E. *et al.* (2008) Post-transcriptional silencing of CCR3 downregulates IL-4 stimulated release of eotaxin-3 (CCL26) and other CCR3 ligands in alveolar type II cells. *Cytokine* **44**:342.

Sample(s) Tested: A549 human alveolar epithelial cell culture supernate.

CCL26/Eotaxin-3

Quantikine Human CCL26/Eotaxin-3 ELISA

Catalog # **DCC260**

Sensitivity: 5.2 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Taka, E. *et al.* (2008) Post-transcriptional silencing of CCR3 downregulates IL-4 stimulated release of eotaxin-3 (CCL26) and other CCR3 ligands in alveolar type II cells. *Cytokine* **44**:342.

Sample(s) Tested: A549 human alveolar epithelial cell culture supernate and cell lysate.

Falcone, C. *et al.* (2006) Markers of eosinophilic inflammation and risk prediction in patients with coronary artery disease. *Eur. J. Clin. Invest.* **36**:211.

Sample(s) Tested: human plasma (EDTA).

Blanchard, C. *et al.* (2006) Eotaxin-3 and a uniquely conserved gene-expression profile in eosinophilic esophagitis. *J. Clin. Invest.* **116**: 536.

Sample(s) Tested: human plasma (heparin).

CCL27/CTACK

Quantikine Human CCL27/CTACK ELISA

Catalog # **DCC270**

Sensitivity: 4.68 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Huang, V. *et al.* (2008) Cutting edge: rapid accumulation of epidermal CCL27 in skin-draining lymph nodes following topical application of a contact sensitizer recruits CCR10-expressing T cells. *J. Immunol.* **180**:6462.

Sample(s) Tested: human serum, human lymphatic fluid.

Wick, N. *et al.* (2008) Lymphatic precollectors contain a novel, specialized subpopulation of podoplanin low, CCL27-expressing lymphatic endothelial cells. *Am. J. Pathol.* **173**:1202.

Sample(s) Tested: human lymphatic endothelial cell culture supernate.

Sasaki, M. *et al.* (2006) Presence of circulating CCR10⁺ T cells and elevated serum CTACK/CCL27 in the early stage of mycosis fungoides. *Clin. Cancer Res.* **12**:2670.

Sample(s) Tested: human serum.

CD14

Quantikine Human Soluble CD14 ELISA

Catalog # **DC140**

Sensitivity: 125 pg/mL

Range: 250-16,000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Pandrea, I. *et al.* (2008) Cutting edge: Experimentally induced immune activation in natural hosts of simian immunodeficiency virus induces significant increases in viral replication and CD4⁺ T cell depletion. *J. Immunol.* **181**:6687.

Sample(s) Tested: African Green Monkey plasma.

Nareika, A. *et al.* (2008) High glucose enhances lipopolysaccharide-stimulated CD14 expression in U937 mononuclear cells by increasing nuclear factor κ B and AP-1 activities. *J. Endocrinol.* **196**:45.

Sample(s) Tested: U937 human leukemic monocyte cell culture supernate.

Laitinen, K. *et al.* (2006) Breast milk fatty acids may link innate and adaptive immune regulation: analysis of soluble CD14, prostaglandin E2, and fatty acids. *Pediatr. Res.* **59**:723.

Sample(s) Tested: human serum, human milk.

CD23/Fc ϵ RII

Quantikine Human CD23/Fc ϵ RII ELISA

Catalog # **DCD230**

Sensitivity: 5.1 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

CD40 Ligand/TNFSF5

Quantikine Human CD40 Ligand/TNFSF5 ELISA Catalog # DCDL40*

Sensitivity: 10.1 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Arellano-Rodrigo, E. *et al.* (2009) Platelet turnover, coagulation factors, and soluble markers of platelet and endothelial activation in essential thrombocythemia: relationship with thrombosis occurrence and JAK2 V617F allele burden. *Am. J. Hematol.* **84**:102.

Sample(s) Tested: human plasma (citrate).

Malmström, R.E. *et al.* (2009) No effect of lipid lowering on platelet activity in patients with coronary artery disease and type 2 diabetes or impaired glucose tolerance. *Thromb. Haemost.* **101**:157.

Sample(s) Tested: human serum.

Choudhury, A. *et al.* (2008) Soluble CD40 ligand, platelet surface CD40 ligand, and total platelet CD40 ligand in atrial fibrillation: relationship to soluble P-selectin, stroke risk factors, and risk factor intervention. *Chest* **134**:574.

Sample(s) Tested: human platelet-poor plasma (citrate).

CD163

Quantikine Human CD163 ELISA Catalog # DC1630

Sensitivity: 0.613 ng/mL

Range: 1.56-100 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.

Chemerin

Quantikine Mouse Chemerin ELISA Catalog # MCHM00

Sensitivity: 3.47 pg/mL

Range: 46.9-3000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Albanesi, C. *et al.* (2009) Chemerin expression marks early psoriatic skin lesions and correlates with plasmacytoid dendritic cell recruitment. *J. Exp. Med.* **206**:249.

Sample(s) Tested: human psoriatic fibroblast cell culture supernate.

Chitinase 3-like 1

Quantikine Human Chitinase 3-like 1 ELISA Catalog # DC3L10

Sensitivity: 8.15 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

Quantikine Mouse Chitinase 3-like 1 ELISA Catalog # MC3L10

Sensitivity: 16 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Clusterin

Quantikine Human Clusterin ELISA Catalog # DCLU00

Sensitivity: 1.05 ng/mL

Range: 3.12-200 ng/mL

Sample Volume: 50 µL

Validated Sample Types: cell culture supernate, plasma (EDTA, heparin), saliva, serum, and urine.

CNTF

Quantikine Human CNTF ELISA Catalog # DNT00

Sensitivity: 8 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 200 µL

Validated Sample Types: cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Sieving, P.A. *et al.* (2006) Ciliary neurotrophic factor (CNTF) for human retinal degeneration: phase I trial of CNTF delivered by encapsulated cell intraocular implants. *Proc. Natl. Acad. Sci. U.S.A.* **103**:3896.

Sample(s) Tested: ARPE-19 human retinal pigment epithelial cell culture supernate.

Saigo, Y. *et al.* (2004) Transplantation of transduced retinal pigment epithelium in rats. *Invest. Ophthalmol. Vis. Sci.* **45**:199.

Sample(s) Tested: rat retinal pigment epithelial cell culture supernate.

Truckenmiller, M.E. *et al.* (2002) AF5, a CNS cell line immortalized with an N-terminal fragment of SV40 large T: growth, differentiation, genetic stability, and gene expression. *Exp. Neurol.* **175**:318.

Sample(s) Tested: AF5 rat mesencephalic cell culture supernate.

Coagulation Factor III/Tissue Factor

Quantikine Human Coagulation Factor III/Tissue Factor ELISA Catalog # DCF300

Sensitivity: 2.05 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, cell lysates, plasma (citrate, EDTA, heparin), urine.

Johnston, P.V. *et al.* (2009) Engraftment, differentiation, and functional benefits of autologous cardiosphere-derived cells in porcine ischemic cardiomyopathy. *Circulation* **120**:1075.

Sample(s) Tested: porcine mesenchymal stem cell, endomyocardial cell, bone marrow mononuclear cell lysates.



Complement Factor D/Adipsin

Quantikine Human Complement Factor D ELISA

Catalog # **DFD00**

Sensitivity: 0.025 ng/mL

Range: 0.312-20 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

Corin

Quantikine Human Corin ELISA

Catalog # **DCRN00**

Sensitivity: 23.7 pg/mL

Range: 75-4800 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenates.

Ichiki, T. *et al.* (2009) Determinants of circulating corin in healthy subjects. *J. Card. Fail.* **15**:S37.

Sample(s) Tested: human serum, human plasma.

Cortisol

Parameter Multi-species Cortisol Assay

Catalog # **KGE008***

Sensitivity: 0.111 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, saliva, serum, urine.

Hu, A. *et al.* (2009) Th2 cytokine-induced upregulation of 11β-hydroxysteroid dehydrogenase-1 facilitates glucocorticoid suppression of proasthmatic airway smooth muscle function. *Am. J. Physiol. Lung Cell Mol. Physiol.* **296**:L790.

Sample(s) Tested: human airway smooth muscle cell lysates.

C-Reactive Protein/CRP

Quantikine Human C-Reactive Protein ELISA

Catalog # **DCRP00***

Sensitivity: 0.022 ng/mL

Range: 0.78-50 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Polotsky, V.Y. *et al.* (2009) Obstructive sleep apnea, insulin resistance, and steatohepatitis in severe obesity. *Am. J. Respir. Crit. Care Med.* **179**:228.

Sample(s) Tested: human serum.

Hamer, M. & A. Steptoe (2009) Prospective study of physical fitness, adiposity, and inflammatory markers in healthy middle-aged men and women. *Am. J. Clin. Nutr.* **89**:85.

Sample(s) Tested: human plasma (EDTA).

Montecucco, F. *et al.* (2008) C-reactive protein (CRP) induces chemokine secretion via CD11b/ICAM-1 interaction in human adherent monocytes. *J. Leukoc. Biol.* **84**:1109.

Sample(s) Tested: human recombinant CRP.

Raj, D.S. *et al.* (2007) Haemodialysis induces mitochondrial dysfunction and apoptosis. *Eur. J. Clin. Invest.* **37**:971.

Sample(s) Tested: human plasma.

Creatinine

Parameter Multi-species Creatinine Assay

Catalog # **KGE005**

Sensitivity: 0.07 mg/dL

Range: 0.31-20 mg/dL

Sample Volume: 50 µL

Validated Sample Type(s): urine.

Ganz, T. *et al.* (2008) Immunoassay for human serum hepcidin. *Blood* **112**:4292.

Sample(s) Tested: human urine.

Kim, Y.H. *et al.* (2008) Combination therapy with cisplatin and anti-4-1BB: synergistic anticancer effects and amelioration of cisplatin-induced nephrotoxicity. *Cancer Res.* **68**:7264.

Sample(s) Tested: human serum.

Tammela, T. *et al.* (2008) Blocking VEGFR-3 suppresses angiogenic sprouting and vascular network formation. *Nature* **454**:656.

Sample(s) Tested: mouse urine.

CREB

Cell-Based ELISA Human/Mouse/Rat Phospho-CREB (S133)

Catalog # **KCB2510**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.

CX₃CL1/Fractalkine

Quantikine Human CX₃CL1/Fractalkine ELISA

Catalog # **DCX310**

Sensitivity: 0.072 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 100 µL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), saliva, serum, urine.

Matsumiya, T. *et al.* (2010) Characterization of synergistic induction of CX₃CL1/Fractalkine by TNF-α and IFN-γ in vascular endothelial cells: an essential role for TNF-α in post-transcriptional regulation of CX₃CL1. *J. Immunol.* **184**:4205.

Sample(s) Tested: human umbilical vein endothelial cell culture supernate.

Quantikine Mouse CX₃CL1/Fractalkine ELISA

Catalog # **MCX310**

Sensitivity: 0.32 ng/mL

Range: 0.62-40 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenate.

Ishida, Y. *et al.* (2008) Essential involvement of CX₃CR1-mediated signals in the bactericidal host defense during septic peritonitis. *J. Immunol.* **181**:4208.

Sample(s) Tested: mouse peritoneal lavage.

Trujillo, G. *et al.* (2008) A novel mechanism for CCR4 in the regulation of macrophage activation in bleomycin-induced pulmonary fibrosis. *Am. J. Pathol.* **172**:1209.

Sample(s) Tested: homogenized mouse lung tissue.

CX₃CL1/Fractalkine continued

Ren, T. *et al.* (2007) Down-regulation of surface fractalkine by RNA interference in B16 melanoma reduced tumor growth in mice. *Biochem. Biophys. Res. Commun.* **364**:978.
Sample(s) Tested: B16-FO mouse melanoma cell culture supernate.

CXCL1/GRO α /KC/CINC-1**Quantikine Human CXCL1/GRO α ELISA**Catalog # **DGR00***

Sensitivity: 10 pg/mL
Range: 31.2-1000 pg/mL
Sample Volume: 200 μ L
Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Salim, J.P. *et al.* (2009) Dysregulation of stromal derived factor 1/CXCR4 axis in the megakaryocytic lineage in essential thrombocythemia. *Br. J. Haematol.* **144**:69.
Sample(s) Tested: human plasma (EDTA).

Skov, L. *et al.* (2008) IL-8 as antibody therapeutic target in inflammatory diseases: reduction of clinical activity in palmoplantar pustulosis. *J. Immunol.* **181**:669.
Sample(s) Tested: human palmoplantar pustulosis wash fluid.

Acosta, J.C. *et al.* (2008) Chemokine signaling via the CXCR2 receptor reinforces senescence. *Cell* **133**:1006.
Sample(s) Tested: IMR-90 human lung fibroblast cell culture supernate.

Breland, U.M. *et al.* (2008) A potential role of the CXC chemokine GRO α in atherosclerosis and plaque destabilization: downregulatory effects of statins. *Arterioscler. Thromb. Vasc. Biol.* **28**:1005.
Sample(s) Tested: human plasma (EDTA).

Ko, F.W.S. *et al.* (2006) Exhaled breath condensate levels of 8-isoprostane, growth related oncogene α and monocyte chemoattractant protein-1 in patients with chronic obstructive pulmonary disease. *Resp. Med.* **100**:630.
Sample(s) Tested: human exhaled breath condensate.

Quantikine Mouse CXCL1/KC ELISACatalog # **MKCO0B***

Sensitivity: 2 pg/mL
Range: 15.6-1000 pg/mL
Sample Volume: 50 μ L
Validated Sample Type(s): cell culture supernate, serum.

Roelofs, J.J. *et al.* (2009) Plasminogen activator inhibitor-1 regulates neutrophil influx during acute pyelonephritis. *Kidney Int.* **75**:52.
Sample(s) Tested: homogenized mouse kidney tissue.

Boehme, S.A. *et al.* (2009) A small molecule CRTH2 antagonist inhibits FITC-induced allergic cutaneous inflammation. *Int. Immunol.* **21**:81.
Sample(s) Tested: homogenized mouse ear tissue.

Leoni, G. *et al.* (2008) Inflamed phenotype of the mesenteric microcirculation of melanocortin type 3 receptor-null mice after ischemia-reperfusion. *FASEB J.* **22**:4228.
Sample(s) Tested: mouse plasma (heparin), homogenized mouse mesentery tissue.

Zhou, W. *et al.* (2008) Cyclooxygenase inhibition during allergic sensitization increases STAT6-independent primary and memory Th2 responses. *J. Immunol.* **181**:5360.
Sample(s) Tested: homogenized mouse spleen tissue.

Lam, D. *et al.* (2008) Airway house dust extract exposures modify allergen-induced airway hypersensitivity responses by TLR4-dependent and independent pathways. *J. Immunol.* **181**:2925.
Sample(s) Tested: mouse BALF.

Quantikine Rat CXCL1/CINC-1 ELISACatalog # **RCN100**

Sensitivity: 1.3 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 50 μ L
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Kelher, M.R. *et al.* (2009) Plasma from stored packed red blood cells and MHC class I antibodies causes acute lung injury in a 2-event *in vivo* rat model. *Blood* **113**:2079.
Sample(s) Tested: rat BALF.

Wijagkanalan, W. *et al.* (2008) Enhanced anti-inflammation of inhaled dexamethasone palmitate using mannosylated liposomes in an endotoxin-induced lung inflammation model. *Mol. Pharmacol.* **74**:1183.
Sample(s) Tested: homogenized rat lung tissue.

Hanusch, C. *et al.* (2008) Donor dopamine treatment limits pulmonary oedema and inflammation in lung allografts subjected to prolonged hypothermia. *Transplantation* **85**:1449.
Sample(s) Tested: rat lung perfusion.

CXCL2/GRO β /MIP-2/CINC-3**Quantikine Mouse CXCL2/MIP-2 ELISA**Catalog # **MM200***

Sensitivity: 1.5 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 50 μ L
Validated Sample Type(s): cell culture supernate, serum.

Hoetzel, A. *et al.* (2009) Carbon monoxide prevents ventilator-induced lung injury via caveolin-1. *Crit. Care Med.* **37**:1708.
Sample(s) Tested: mouse BALF.

Mayer, K. *et al.* (2009) Acute lung injury is reduced in fat-1 mice endogenously synthesizing n-3 fatty acids. *Am. J. Respir. Crit. Care Med.* **179**:474.
Sample(s) Tested: mouse BALF.

Roelofs, J.J. *et al.* (2009) Plasminogen activator inhibitor-1 regulates neutrophil influx during acute pyelonephritis. *Kidney Int.* **75**:52.
Sample(s) Tested: homogenized mouse kidney tissue.

Boehme, S.A. *et al.* (2009) A small molecule CRTH2 antagonist inhibits FITC-induced allergic cutaneous inflammation. *Int. Immunol.* **21**:81.
Sample(s) Tested: homogenized mouse skin tissue.

Ghio, A.J. *et al.* (2008) Particulate matter in cigarette smoke alters iron homeostasis to produce a biological effect. *Am. J. Respir. Crit. Care Med.* **178**:1130.
Sample(s) Tested: rat BALF.

Quantikine Rat CXCL2/CINC-3 ELISACatalog # **RCN300**

Sensitivity: 2.7 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μ L
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Choi, G. *et al.* (2008) Antithrombin inhibits bronchoalveolar activation of coagulation and limits lung injury during *Streptococcus pneumoniae* pneumonia in rats. *Crit. Care Med.* **36**:204.
Sample(s) Tested: rat BALF.



Yu, H.P. *et al.* (2007) Mechanism of the nongenomic effects of estrogen on intestinal myeloperoxidase activity following trauma-hemorrhage: up-regulation of the PI-3K/Akt pathway. *J. Leukoc. Biol.* **82**:774.

Sample(s) Tested: homogenized rat intestine tissue.

Yang, S. *et al.* (2006) Mechanism of IL-6 mediated cardiac dysfunction following trauma-hemorrhage. *J. Mol. Cell Cardiol.* **40**: 570.

Sample(s) Tested: homogenized rat heart tissue.

CXCL3/CINC-2

Quantikine Rat CXCL3/CINC-2 α/β ELISA

Catalog # **RCN200**

Sensitivity: 3.9 pg/mL

Range: 6.25-400 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Stevenson, C.S. *et al.* (2007) Comprehensive gene expression profiling of rat lung reveals distinct acute and chronic responses to cigarette smoke inhalation. *Am. J. Physiol. Lung Cell Mol. Physiol.* **293**:L1183.

Sample(s) Tested: homogenized rat lung tissue, rat BALF.

CXCL5/ENA-78

Quantikine Human CXCL5/ENA-78 ELISA

Catalog # **DX000**

Sensitivity: 15 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (citrate, EDTA, heparin), serum.

Sung, S.Y. *et al.* (2008) Coevolution of prostate cancer and bone stroma in three-dimensional coculture: implications for cancer growth and metastasis. *Cancer Res.* **68**:9996.

Sample(s) Tested: human serum.

Lee, S.J. *et al.* (2008) CT20126, a novel immunosuppressant, prevents collagen-induced arthritis through the down-regulation of inflammatory gene expression by inhibiting NF- κ B activation. *Biochem. Pharmacol.* **76**:79.

Sample(s) Tested: human synoviocytes cell culture supernate.

Dimberg, J. *et al.* (2007) Expression and gene polymorphisms of the chemokine CXCL5 in colorectal cancer patients. *Int. J. Oncol.* **31**:97.

Sample(s) Tested: human plasma.

Woods, J.M. *et al.* (2000) Reduction of inflammatory cytokines and prostaglandin E2 by IL-13 gene therapy in rheumatoid arthritis synovium. *J. Immunol.* **165**:2755.

Sample(s) Tested: homogenized human synovial tissue.

CXCL6/GCP-2

Quantikine Human CXCL6/GCP-2 ELISA

Catalog # **DGC00**

Sensitivity: 8 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Matsuda, A. *et al.* (2007) Th1/Th2 cytokines reciprocally regulate *in vitro* pulmonary angiogenesis via CXC chemokine synthesis. *Am. J. Respir. Cell Mol. Biol.* **38**:16.

Sample(s) Tested: human microvascular endothelial cell culture supernate.

Abe, Y. *et al.* (2007) L5, the most electronegative subfraction of plasma LDL, induces endothelial vascular cell adhesion molecule 1 and CXC chemokines, which mediate mononuclear leukocyte adhesion. *Atherosclerosis* **192**:56.

Sample(s) Tested: human umbilical vein endothelial cell culture supernate.

Maheshwari, A. *et al.* (2003) ELR⁺ CXC chemokines in human milk. *Cytokine* **24**:91.

Sample(s) Tested: human milk.

CXCL8/IL-8

Quantikine Canine CXCL8/IL-8 ELISA

Catalog # **CA8000**

Sensitivity: 4.31 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Quantikine Human CXCL8/IL-8 ELISA

Catalog # **D8000C***

Sensitivity: 7.5 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Ankersmit, H.J. *et al.* (2009) Irradiated cultured apoptotic peripheral blood mononuclear cells regenerate infarcted myocardium. *Eur. J. Clin. Invest.* **39**:445.

Sample(s) Tested: human peripheral blood mononuclear cell culture supernate.

Trøseid, M. *et al.* (2009) Interleukin-18 is a strong predictor of cardiovascular events in elderly men with the metabolic syndrome: synergistic effect of inflammation and hyperglycemia. *Diabetes Care* **32**:486.

Sample(s) Tested: human serum.

Salim, J.P. *et al.* (2009) Dysregulation of stromal derived factor 1/CXCR4 axis in the megakaryocytic lineage in essential thrombocythemia. *Br. J. Haematol.* **144**:69.

Sample(s) Tested: human plasma (EDTA).

Fulcher, M.L. *et al.* (2009) Novel human bronchial epithelial cell lines for cystic fibrosis research. *Am. J. Physiol. Lung Cell Mol. Physiol.* **296**:L82.

Sample(s) Tested: novel human bronchial epithelial cell culture supernate.

CXCL8/IL-8 continued**QuantiGlo Chemiluminescent Human CXCL8/IL-8 ELISA**Catalog # **Q8000B**

Sensitivity: 0.97 pg/mL

Range: 1.6–5,000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Gessner, C. *et al.* (2008) Presence of cytokeratins in exhaled breath condensate of mechanical ventilated patients. *Respir. Med.* **102**:299.

Sample(s) Tested: human exhaled breath condensate.

Zinner, R.G. *et al.* (2007) Phase I clinical and pharmacodynamic evaluation of oral CI-1033 in patients with refractory cancer. *Clin. Cancer Res.* **13**:3006.

Sample(s) Tested: human plasma.

Quantikine Porcine CXCL8/IL-8 ELISACatalog # **P8000**

Sensitivity: 6.7 pg/mL

Range: 62.5–4000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, serum.

Wall, R. *et al.* (2009) Metabolic activity of the enteric microbiota influences the fatty acid composition of murine and porcine liver and adipose tissues. *Am. J. Clin. Nutr.* **89**:1393.

Sample(s) Tested: porcine lamina propria lymphocyte cell culture supernate.

Sibila, O. *et al.* (2008) Effects of glucocorticoids in ventilated piglets with severe pneumonia. *Eur. Respir. J.* **32**:1037.

Sample(s) Tested: porcine serum, porcine BALF.

Seeger, F.H. *et al.* (2002) Fibrinogen induces chemotactic activity in endothelial cells. *Acta Physiol. Scand.* **176**:109.

Sample(s) Tested: porcine endothelial cell culture supernate.

CXCL9/MIG**Quantikine Human CXCL9/MIG ELISA**Catalog # **DCX900**

Sensitivity: 11.3 pg/mL

Range: 31.2–2000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Kim, M.J. *et al.* (2009) Villitis of unknown etiology is associated with a distinct pattern of chemokine up-regulation in the feto-maternal and placental compartments: implications for conjoint maternal allograft rejection and maternal anti-fetal graft-versus-host disease. *J. Immunol.* **182**:3919.

Sample(s) Tested: human plasma (EDTA).

Hatfield, K. *et al.* (2009) Primary human acute myeloid leukaemia cells increase the proliferation of microvascular endothelial cells through the release of soluble mediators. *Br. J. Haematol.* **144**:53.

Sample(s) Tested: human acute myeloid leukemia cell culture supernate.

Peng, W. *et al.* (2008) Urinary fractalkine is a marker of acute rejection. *Kidney Int.* **74**:1454.

Sample(s) Tested: human urine.

Linge, H.M. *et al.* (2008) The antibacterial chemokine MIG/CXCL9 is constitutively expressed in epithelial cells of the male urogenital tract and is present in seminal plasma. *J. Interferon Cytokine Res.* **28**:191.

Sample(s) Tested: human seminal plasma.

Quantikine Mouse CXCL9/MIG ELISACatalog # **MCX900**

Sensitivity: 7.8 pg/mL

Range: 31.2–2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum, tissue homogenate.

Trujillo, G. *et al.* (2008) A novel mechanism for CCR4 in the regulation of macrophage activation in bleomycin-induced pulmonary fibrosis. *Am. J. Pathol.* **172**:1209.

Sample(s) Tested: homogenized mouse lung tissue.

Carr, D.J. *et al.* (2008) An increase in herpes simplex virus type 1 in the anterior segment of the eye is linked to a deficiency in NK cell infiltration in mice deficient in CXCR3. *J. Interferon Cytokine Res.* **28**:245.

Sample(s) Tested: homogenized mouse cornea and iris tissue.

Su, S.B. *et al.* (2007) Altered chemokine profile associated with exacerbated autoimmune pathology under conditions of genetic interferon- γ deficiency. *Invest. Ophthalmol. Vis. Sci.* **48**:4616.

Sample(s) Tested: mouse lymph node explant cell culture supernate, homogenized mouse eye tissue.

CXCL10/IP-10/CRG-2**Quantikine Human CXCL10/IP-10 ELISA**Catalog # **DIP100***

Sensitivity: 4.46 pg/mL

Range: 7.8–500 pg/mL

Sample Volume: 100 µL cell culture supernate/saliva, 75 µL serum/plasma.

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.

Hatfield, K. *et al.* (2009) Primary human acute myeloid leukaemia cells increase the proliferation of microvascular endothelial cells through the release of soluble mediators. *Br. J. Haematol.* **144**:53.

Sample(s) Tested: acute myeloid leukemia cell culture supernate.

Peng, W. *et al.* (2008) Urinary fractalkine is a marker of acute rejection. *Kidney Int.* **74**:1454.

Sample(s) Tested: human urine.

Mazzanti, B. *et al.* (2008) Differences in mesenchymal stem cell cytokine profiles between MS patients and healthy donors: implication for assessment of disease activity and treatment. *J. Neuroimmunol.* **199**:142.

Sample(s) Tested: human mesenchymal stem cell culture supernate.

Hartmann, G. *et al.* (2005) CpG oligonucleotides induce strong humoral but only weak CD4⁺ T cell responses to protein antigens in rhesus macaques *in vivo*. *Vaccine* **23**:3310.

Sample(s) Tested: rhesus macaque plasma.

Hurst, S.M. *et al.* (2001) IL-6 and its soluble receptor orchestrate a temporal switch in the pattern of leukocyte recruitment seen during acute inflammation. *Immunity* **14**:705.

Sample(s) Tested: human peritoneal dialysis effluent.

**Quantikine Mouse CXCL10/IP-10/CRG-2 ELISA**Catalog # **MCX100***

Sensitivity: 4.2 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.

Prantner, D. & U.M. Nagarajan (2009) Role for the chlamydial type III secretion apparatus in host cytokine expression. *Infect. Immun.* **77**:76.

Sample(s) Tested: mouse macrophage cell culture supernate.

Kwak, H.B. *et al.* (2008) Reciprocal cross-talk between RANKL and interferon-gamma-inducible protein 10 is responsible for bone-erosive experimental arthritis. *Arthritis Rheum.* **58**:1332.

Sample(s) Tested: mouse serum, mouse osteoblast precursor cell culture supernate.

Campanella, G.S. *et al.* (2008) Chemokine receptor CXCR3 and its ligands CXCL9 and CXCL10 are required for the development of murine cerebral malaria. *Proc. Natl. Acad. Sci. U.S.A.* **105**:4814.

Sample(s) Tested: homogenized mouse spleen tissue.

CXCL11/I-TAC**Quantikine Human CXCL11/I-TAC ELISA**Catalog # **DCX110**

Sensitivity: 39.7 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Kim, M.J. *et al.* (2009) Villitis of unknown etiology is associated with a distinct pattern of chemokine up-regulation in the feto-maternal and placental compartments: implications for conjoint maternal allograft rejection and maternal anti-fetal graft-versus-host disease. *J. Immunol.* **182**:3919.

Sample(s) Tested: human plasma (EDTA).

Hatfield, K. *et al.* (2009) Primary human acute myeloid leukaemia cells increase the proliferation of microvascular endothelial cells through the release of soluble mediators. *Br. J. Haematol.* **144**:53.

Sample(s) Tested: human acute myeloid leukemia cell culture supernate.

Linge, H.M. *et al.* (2008) The antibacterial chemokine MIG/CXCL9 is constitutively expressed in epithelial cells of the male urogenital tract and is present in seminal plasma. *J. Interferon Cytokine Res.* **28**:191.

Sample(s) Tested: human seminal plasma.

Costa, C. *et al.* (2007) CXCR3 and CCR5 chemokines in induced sputum from patients with COPD. *Chest* **133**:26.

Sample(s) Tested: human saliva.

Panzer, U. *et al.* (2004) CXCR3 and CCR5 positive T-cell recruitment in acute human renal allograft rejection. *Transplantation* **78**:1341.

Sample(s) Tested: human urine.

CXCL12/SDF-1 α **Quantikine Human CXCL12/SDF-1 α ELISA**Catalog # **DSA00***

Sensitivity: 47 pg/mL

Range: 156-10,000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin).

Makam, M. *et al.* (2009) Activation of critical, host-induced, metabolic and stress pathways marks neutrophil entry into cystic fibrosis lungs. *Proc. Natl. Acad. Sci. U.S.A.* **106**:5779.

Sample(s) Tested: human plasma, human sputum.

Salim, J.P. *et al.* (2009) Dysregulation of stromal derived factor 1/CXCR4 axis in the megakaryocytic lineage in essential thrombocythemia. *Br. J. Haematol.* **144**:69.

Sample(s) Tested: human plasma (EDTA).

Ngo, H.T. *et al.* (2008) SDF-1/CXCR4 and VLA-4 interaction regulates homing in Waldenstrom macroglobulinemia. *Blood* **112**:150.

Sample(s) Tested: human serum, human bone marrow.

Quantikine Mouse CXCL12/SDF-1 α ELISACatalog # **MCX120**

Sensitivity: 0.069 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum.

Zaruba, M.M. *et al.* (2009) Synergy between CD26/DPP-IV inhibition and G-CSF improves cardiac function after acute myocardial infarction. *Cell Stem Cell* **4**:313.

Sample(s) Tested: homogenized mouse heart tissue.

Feng, W. *et al.* (2008) The angiogenic response is dictated by β 3 integrin on bone marrow-derived cells. *J. Cell Biol.* **183**:1145.

Sample(s) Tested: mouse tumor cell lysate, mouse plasma.

Shaked, Y. *et al.* (2008) Rapid chemotherapy-induced acute endothelial progenitor cell mobilization: implications for antiangiogenic drugs as chemosensitizing agents. *Cancer Cell* **14**:263.

Sample(s) Tested: mouse plasma.

CXCL13/BLC/BCA-1**Quantikine Human CXCL13/BLC/BCA-1 ELISA**Catalog # **DCX130**

Sensitivity: 3.97 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.

Kim, M.J. *et al.* (2009) Villitis of unknown etiology is associated with a distinct pattern of chemokine up-regulation in the feto-maternal and placental compartments: implications for conjoint maternal allograft rejection and maternal anti-fetal graft-versus-host disease. *J. Immunol.* **182**:3919.

Sample(s) Tested: human plasma (EDTA).

Panse, J. *et al.* (2008) Chemokine CXCL13 is overexpressed in the tumour tissue and in the peripheral blood of breast cancer patients. *Br. J. Cancer* **99**:930.

Sample(s) Tested: human serum, homogenized human breast cancer tissue.

Aloisi, F. *et al.* (2008) Lymphoid chemokines in chronic neuroinflammation. *J. Neuroimmunol.* **198**:106.

Sample(s) Tested: human CSF.

CXCL13/BLC/BCA-1 continued

Shin, J.J. *et al.* (2007) High levels of inflammatory chemokines and cytokines in joint fluid and synovial tissue throughout the course of antibiotic-refractory Lyme arthritis. *Arthritis Rheum.* **56**:1325.

Sample(s) Tested: human synovial fluid.

Quantikine Mouse CXCL13/BLC/BCA-1 ELISACatalog # **MCX130**

Sensitivity: 2.84 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Zhou, W. *et al.* (2008) Cyclooxygenase inhibition during allergic sensitization increases STAT6-independent primary and memory Th2 responses. *J. Immunol.* **181**:5360.

Sample(s) Tested: homogenized mouse spleen tissue.

Martin, A.P. *et al.* (2006) The chemokine decoy receptor M3 blocks CC chemokine ligand 2 and CXCL13 chemokine ligand 13 function *in vivo*. *J. Immunol.* **177**:7296.

Sample(s) Tested: mouse pancreatic β cell culture supernate.

CXCL16**Quantikine Human CXCL16 ELISA**Catalog # **DCX160**

Sensitivity: 0.017 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Sung, S.Y. *et al.* (2008) Coevolution of prostate cancer and bone stroma in three-dimensional coculture: implications for cancer growth and metastasis. *Cancer Res.* **68**:9996.

Sample(s) Tested: human serum.

Wente, M.N. *et al.* (2008) Expression and potential function of the CXCL16 chemokine in pancreatic ductal adenocarcinoma. *Int. J. Oncol.* **33**:297.

Sample(s) Tested: human serum, CAPAN-1, BxPC3, Colo357, and T3M4 human pancreatic cancer cell culture supernates.

Held-Feindt, J. *et al.* (2008) Overexpression of CXCL16 and its receptor CXCR6/Bonzo promotes growth of human schwannomas. *Glia* **56**:764.

Sample(s) Tested: human schwannoma cell culture supernate.

Cystatin C**Quantikine Human Cystatin C ELISA**Catalog # **DSCTCO**

Sensitivity: 0.227 ng/mL

Range: 3.12-100 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), saliva, serum, urine.

Tsai, H.T. *et al.* (2009) Imbalanced serum concentration between cathepsin B and cystatin C in patients with pelvic inflammatory disease. *Fertil. Steril.* **91**:549.

Sample(s) Tested: human serum.

Cytochrome c**Quantikine Human Cytochrome c ELISA**Catalog # **DCTCO***

Sensitivity: 0.31 ng/mL

Range: 0.625-20 ng/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell lysates.

Mookherjee, P. *et al.* (2007) Mitochondrial-targeted active Akt protects SH-SY5Y neuroblastoma cells from staurosporine-induced apoptotic cell death. *J. Cell. Biochem.* **102**:196.

Sample(s) Tested: SH-SY5Y human neuroblastoma cell lysate.

De Miliato, A. *et al.* (2007) Proton pump inhibitors induce apoptosis of human B cell tumors through a caspase-independent mechanism involving reactive oxygen species. *Cancer Res.* **67**:5408.

Sample(s) Tested: Nalm-6 human leukemia pre-B cell lysate.

Li, Y. *et al.* (2007) Apolipoprotein-J prevention of fetal cardiac myoblast apoptosis induced by ethanol. *Biochem. Biophys. Res. Commun.* **357**:157.

Sample(s) Tested: canine myoblast cell lysate.

Quantikine Mouse/Rat Cytochrome c ELISACatalog # **MCTCO**

Sensitivity: 0.5 ng/mL

Range: 0.78-25 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell lysates.

Tyurin, V.A. *et al.* (2008) Mass-spectrometric characterization of phospholipids and their primary peroxidation products in rat cortical neurons during staurosporine-induced apoptosis. *J. Neurochem.* **107**:1614.

Sample(s) Tested: mouse neuron cell lysate.

Wang, X. *et al.* (2008) Inhibitors of cytochrome c release with therapeutic potential for Huntington's disease. *J. Neurosci.* **28**:9473.

Sample(s) Tested: mouse liver mitochondria cell lysate.

Wang, Y. *et al.* (2008) Gene inactivation of Na⁺/H⁺ exchanger isoform 1 attenuates apoptosis and mitochondrial damage following transient focal cerebral ischemia. *Eur. J. Neurosci.* **28**:51.

Sample(s) Tested: mouse brain cell lysate.

Dkk-1**Quantikine Human Dkk-1 ELISA**Catalog # **DKK100**

Sensitivity: 15.6 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Quantikine Mouse Dkk-1 ELISACatalog # **MKK100**

Sensitivity: 29.6 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.



DPPIV/CD26

Quantikine Human DPPIV/CD26 ELISA

Catalog # **DC260**

Sensitivity: 0.072 ng/mL

Range: 0.31-20 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum, urine.

EGF

Quantikine Human EGF ELISA

Catalog # **DEG00***

Sensitivity: 0.7 pg/mL

Range: 3.9-250 pg/mL

Sample Volume: 200 µL

Validated Sample Types: cell culture supernate, platelet-poor plasma (citrate, EDTA, heparin), serum, urine.

Cherney, D.Z. *et al.* (2009) Effect of protein kinase C β inhibition on renal hemodynamic function and urinary biomarkers in humans with type 1 diabetes: a pilot study. *Diabetes Care* **32**:91.

Sample(s) Tested: human urine.

Han, S.W. *et al.* (2009) Phase II study and biomarker analysis of cetuximab combined with modified FOLFOX6 in advanced gastric cancer. *Br. J. Cancer* **100**:298.

Sample(s) Tested: human serum.

Ren, W. *et al.* (2008) Epidermal growth factor receptor blockade in combination with conventional chemotherapy inhibits soft tissue sarcoma cell growth *in vitro* and *in vivo*. *Clin. Cancer Res.* **14**:2785.

Sample(s) Tested: SKLMS1, HT1080, RD, A204, SW872, and SW684 human soft tissue sarcoma cell culture supernates.

Asimakopoulos, B. *et al.* (2007) The levels of steroid hormones and cytokines in individual follicles are not associated with the fertilization outcome after intracytoplasmic sperm injection. *Fertil. Steril.* **90**:60.

Sample(s) Tested: human follicular fluid.

Kverka, M. *et al.* (2007) Cytokine profiling in human colostrum and milk by protein array. *Clin. Chem.* **53**:955.

Sample(s) Tested: human milk and colostrum.

Quantikine Mouse EGF ELISA

Catalog # **MEG00**

Sensitivity: 1.64 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenates, urine.

Katiyar, S. *et al.* (2007) Somatic excision demonstrates that c-Jun induces cellular migration and invasion through induction of stem cell factor. *Mol. Cell. Biol.* **27**:1356.

Sample(s) Tested: c-jun (-/-) embryonic mouse fibroblast cell culture supernate.

EGF R/ErbB1

Quantikine Human EGF R/ErbB1 ELISA

Catalog # **DEGFRO**

Sensitivity: 0.036 ng/mL

Range: 0.313-20 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), serum.

Cell-Based ELISA Human Phospho-EGF R (Y1068)

Catalog # **KCB1095**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.

Jakóbkiewicz-Banecka, J. *et al.* (2009) Genistein-mediated inhibition of glycosaminoglycan synthesis, which corrects storage in cells of patients suffering from mucopolysaccharidoses, acts by influencing an epidermal growth factor-dependent pathway. *J. Biomed. Sci.* **16**:26.

Sample(s) Tested: human skin fibroblast cell lysates.

EG-VEGF/PK1

Quantikine Human EG-VEGF/PK1 ELISA

Catalog # **DEGVFO**

Sensitivity: 5.3 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Endocan

Quantikine Mouse Endocan ELISA

Catalog # **MEND00**

Sensitivity: 21.3 pg/mL

Range: 46.9-3000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Endoglin/CD105

Quantikine Human Endoglin/CD105 ELISA

Catalog # **DNDG00**

Sensitivity: 0.03 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Svatek, R.S. *et al.* (2008) Preoperative plasma endoglin levels predict biochemical progression after radical prostatectomy. *Clin. Cancer Res.* **14**:3362.

Sample(s) Tested: human plasma (citrate).

Jeyabalan, A. *et al.* (2008) Circulating and placental endoglin concentrations in pregnancies complicated by intrauterine growth restriction and preeclampsia. *Placenta* **29**:555.

Sample(s) Tested: human serum.

Cudmore, M. *et al.* (2007) Negative regulation of soluble Flt-1 and soluble endoglin release by heme oxygenase-1. *Circulation* **115**:1789.

Sample(s) Tested: human placental tissue explant cell culture supernate.

Endostatin

Quantikine Human Endostatin ELISA

Catalog # **DNSTO**

Sensitivity: 0.063 ng/mL

Range: 0.31-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.

Sun, X.D. *et al.* (2009) Non-viral endostatin plasmid transfection of mesenchymal stem cells via collagen scaffolds. *Biomaterials* **30**:1222.

Sample(s) Tested: cell culture supernate from goat mesenchymal stem cells transfected with human endostatin.

Ohlund, D. *et al.* (2008) Expression pattern and circulating levels of endostatin in patients with pancreas cancer. *Int. J. Cancer* **122**:2805.

Sample(s) Tested: human plasma.

Mellon, M.J. *et al.* (2008) Suppression of renal cell carcinoma growth and metastasis with sustained antiangiogenic gene therapy. *Hum. Gene Ther.* **19**:487.

Sample(s) Tested: serum from mice expressing human EndoAngio, an endostatin-angiostatin fusion protein.

Bendrick, C. *et al.* (2008) Gene transfer of matrix metalloproteinase-9 induces tumor regression of breast cancer *in vivo*. *Cancer Res.* **68**:3405.

Sample(s) Tested: homogenized human tumor tissue.

Endothelin-1/ET-1

Human Endothelin-1 ELISA

Catalog # **BBE5***

Sensitivity: 1 pg/mL

Range: 4.2-117 pg/mL

Sample Volume: 1 mL

Validated Sample Type(s): extracted plasma (EDTA).

Bien, S. *et al.* (2007) The endothelin receptor blocker bosentan inhibits doxorubicin-induced cardiomyopathy. *Cancer Res.* **67**:10428.

Sample(s) Tested: homogenized mouse cardiac tissue, rat cardiomyocyte cell lysate.

Wu, R. *et al.* (2007) Adrenomedullin and adrenomedullin binding protein-1 prevent metabolic acidosis after uncontrolled hemorrhage in rats. *Crit. Care Med.* **35**:912.

Sample(s) Tested: rat plasma.

Wang, T.D. *et al.* (2006) Relation of improvement in endothelium-dependent flow-mediated vasodilation after rosiglitazone to changes in asymmetric dimethylarginine, endothelin-1, and C-reactive protein in nondiabetic patients with the metabolic syndrome. *Am. J. Cardiol.* **98**:1057.

Sample(s) Tested: human plasma (EDTA).

Dewachter, L. *et al.* (2006) Angiotensin/Tie2 pathway influences smooth muscle hyperplasia in idiopathic pulmonary hypertension. *Am. J. Respir. Crit. Care Med.* **174**:1025.

Sample(s) Tested: D283 human medulloblastoma cell culture supernate.

QuantiGlo Chemiluminescent Human Endothelin-1 ELISA

Catalog # **QET00B**

Sensitivity: 0.102 pg/mL

Range: 0.34-250 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum, urine.

Lund, A.K. *et al.* (2009) Vehicular emissions induce vascular MMP-9 expression and activity associated with endothelin-1-mediated pathways. *Arterioscler. Thromb. Vasc. Biol.* **29**:511.
Sample(s) Tested: human plasma.

Carroll, V.A. & M. Ashcroft (2008) Regulation of angiogenic factors by HDM2 in renal cell carcinoma. *Cancer Res.* **68**:545.

Sample(s) Tested: RCC4 human renal carcinoma cell culture supernate.

Habre, W. *et al.* (2006) The role of endothelin-1 in hyperoxia-induced lung injury in mice. *Respir. Res.* **7**:45.

Sample(s) Tested: mouse plasma (EDTA).

Wang, H. *et al.* (2004) Endothelin in the splanchnic vascular bed of DOCA-salt hypertensive rats. *Am. J. Physiol. Heart Circ. Physiol.* **288**:H729.

Sample(s) Tested: homogenized rat vein tissue, rat plasma.

EPCR

Quantikine Human EPCR ELISA

Catalog # **DEPCRO**

Sensitivity: 0.282 ng/mL

Range: 0.625-40 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

ErbB2/Her2

Cell-Based ELISA Human Phospho-ErbB2 (Y1196)

Catalog # **KCB4438**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.

ErbB3/Her3

Cell-Based ELISA Human Phospho-ErbB3 (Y1262)

Catalog # **KCB5677**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.



ERK

Cell-Based ELISA Human/Mouse/Rat Phospho-ERK1 (T202/Y204)/ERK2 (T185/Y187)

Catalog # **KCB1018**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.

Loos, T. *et al.* (2008) Citrullination of CXCL10 and CXCL11 by peptidylarginine deiminase: a naturally occurring posttranslational modification of chemokines and new dimension of immunoregulation. *Blood* **112**:2648.

Sample(s) Tested: human CXCR3a or CXCR7 transfected CHO cells.

Surveyor IC Human/Mouse/Rat Phospho-ERK1 (T202/Y204)/ ERK2 (T185/Y187) ELISA

Catalog # **SUV1018**

Range: 312-20,000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell lysate.

Grossmann, C. *et al.* (2008) EF domains are sufficient for nongenomic mineralocorticoid receptor actions. *J. Biol. Chem.* **283**:7109.

Sample(s) Tested: cell lysates from CHO-K1, HEK293, and OK human mineral corticoid transfected cells.

Surveyor IC Human/Mouse/Rat Phospho-ERK2 (T185/Y187) ELISA

Catalog # **SUV1483**

Range: 0.19-12 ng/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell lysate.

Matsumoto, T. *et al.* (2009) Involvement of NO and MEK/ERK pathway in enhancement of endothelin-1-induced mesenteric artery contraction in later-stage type 2 diabetic Goto-Kakizaki rat. *Am. J. Physiol. Heart Circ. Physiol.* **296**:H1388.

Sample(s) Tested: homogenized rat artery tissue.

Crawford, S. *et al.* (2008) A novel B-RAF inhibitor blocks interleukin-8 (IL-8) synthesis in human melanoma xenografts, revealing IL-8 as a potential pharmacodynamic biomarker. *Mol. Cancer Ther.* **7**:492.

Sample(s) Tested: human melanoma cell lysate.

Matsumoto, T. *et al.* (2006) Mechanisms underlying lysophosphatidylcholine-induced potentiation of vascular contractions in the Otsuka Long-Evans Tokushima Fatty (OLETF) rat aorta. *Br. J. Pharmacol.* **149**:931.

Sample(s) Tested: homogenized rat aorta tissue.

Erythropoietin/Epo

Quantikine IVD Human Epo ELISA

Catalog # **DEP00**

Sensitivity: 0.6 mIU/mL

Range: 2.5-200 mIU/mL

Sample Volume: 100 µL

Validated Sample Type(s): serum, plasma (EDTA).

McCluskey, S.A. *et al.* (2009) The pharmacokinetic profile of recombinant human erythropoietin is unchanged in patients undergoing cardiac surgery. *Eur. J. Clin. Pharmacol.* **65**:273.

Sample(s) Tested: human serum.

Klings, E.S. *et al.* (2008) Pulmonary arterial hypertension and left-sided heart disease in sickle cell disease: clinical characteristics and association with soluble adhesion molecule expression. *Am. J. Hematol.* **83**:547.

Sample(s) Tested: human plasma (heparin).

Angelillo-Scherrer, A. *et al.* (2008) Role of Gas6 in erythropoiesis and anemia in mice. *J. Clin. Invest.* **118**:583.

Sample(s) Tested: mouse erythroblast cell supernate, mouse plasma.

Stieger, K. *et al.* (2007) Oral administration of doxycycline allows tight control of transgene expression: a key step towards gene therapy of retinal diseases. *Gene Ther.* **14**:1668.

Sample(s) Tested: rhesus macaque anterior chamber eye fluid.

Wang, Y. *et al.* (2007) Post-ischemic treatment with erythropoietin or carbamylated erythropoietin reduces infarction and improves neurological outcome in a rat model of focal cerebral ischemia. *Br. J. Pharmacol.* **151**:1377.

Sample(s) Tested: homogenized brain tissue, plasma, and CSF from rats injected with recombinant CEPO, a carbamylated form of human EPO.

Quantikine Mouse/Rat Epo ELISA

Catalog # **MEP00**

Sensitivity: 46.9 pg/mL mouse, 21.7 pg/mL rat

Range: 47-3000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, mouse plasma (heparin), rat plasma (EDTA, heparin), serum, mouse tissue homogenate.

Chan, C.B. *et al.* (2009) Mice lacking asparaginyl endopeptidase develop disorders resembling hemophagocytic syndrome. *Proc. Natl. Acad. Sci. U.S.A.* **106**:468.

Sample(s) Tested: mouse serum.

Sears, J.E. *et al.* (2008) Prolyl hydroxylase inhibition during hyperoxia prevents oxygen-induced retinopathy. *Proc. Natl. Acad. Sci. U.S.A.* **105**:19898.

Sample(s) Tested: homogenized mouse eye, kidney, and liver tissues.

Boutin, A.T. *et al.* (2008) Epidermal sensing of oxygen is essential for systemic hypoxic response. *Cell* **133**:223.

Sample(s) Tested: mouse plasma (heparin).

Diwan, A. *et al.* (2008) Targeting erythroblast-specific apoptosis in experimental anemia. *Apoptosis* **13**:1022.

Sample(s) Tested: mouse serum.

Hojman, P. *et al.* (2007) Sensitive and precise regulation of haemoglobin after gene transfer of erythropoietin to muscle tissue during electroporation. *Gene Ther.* **14**:950.

Sample(s) Tested: rat serum.

Fas/TNFRSF6/CD95

Quantikine Human Soluble Fas/ TNFRSF6/CD95 ELISA

Catalog # **DFS00**

Sensitivity: 20 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Niessner, A. *et al.* (2009) Prognostic value of apoptosis markers in advanced heart failure patients. *Eur. Heart J.* **30**:789.

Sample(s) Tested: human plasma (EDTA).

Fas/TNFRSF6/CD95 continued

Zedan, H. *et al.* (2009) Soluble Fas and gonadal hormones in infertile men with varicocele. *Fertil. Steril.* **91**:420.

Sample(s) Tested: human seminal plasma.

Svatek, R.S. *et al.* (2006) Soluble Fas - a promising novel urinary marker for the detection of recurrent superficial bladder cancer. *Cancer* **106**:1701.

Sample(s) Tested: human urine, TCC-SUP and T24 human bladder cancer cell culture supernates and lysates.

Fas Ligand/TNFSF6**Quantikine Human Fas Ligand/TNFSF6 ELISA**Catalog # **DFL00**

Sensitivity: 8.05 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, cell lysate, plasma (EDTA, heparin), serum.

Bem, R.A. *et al.* (2009) Mechanical ventilation enhances lung inflammation and caspase activity in a model of mouse pneumovirus infection. *Am. J. Physiol. Lung Cell Mol. Physiol.* **296**:L46.

Sample(s) Tested: homogenized mouse lung tissue.

Chung, W.H. *et al.* (2008) Granulysin is a key mediator for disseminated keratinocyte death in Stevens-Johnson syndrome and toxic epidermal necrolysis. *Nat. Med.* **14**:1343.

Sample(s) Tested: human blister fluid.

Sorrentino, A. *et al.* (2008) Isolation and characterization of CD146⁺ multipotent mesenchymal stromal cells. *Exp. Hematol.* **36**:1035.

Sample(s) Tested: human mesenchymal stromal cell culture supernate.

Kourea, K. *et al.* (2007) Effects of darbepoetin-alpha on plasma pro-inflammatory cytokines, anti-inflammatory cytokine interleukin-10 and soluble Fas/Fas ligand system in anemic patients with chronic heart failure. *Atherosclerosis* **199**:215.

Sample(s) Tested: human plasma (EDTA).

Quantikine Mouse Fas Ligand/TNFSF6 ELISACatalog # **MFL00**

Sensitivity: 3.9 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Beck, J.M. *et al.* (2009) Critical roles of inflammation and apoptosis in improved survival in a model of hyperoxia-induced acute lung injury in *Pneumocystis murina*-infected mice. *Infect. Immun.* **77**:1053.

Sample(s) Tested: homogenized mouse lung tissue.

Omokaro, S.O. *et al.* (2009) Lymphocytes with aberrant expression of Fas or Fas ligand attenuate immune bone marrow failure in a mouse model. *J. Immunol.* **182**:3414.

Sample(s) Tested: mouse serum.

Kierstein, S. *et al.* (2008) Ozone inhalation induces exacerbation of eosinophilic airway inflammation and hyperresponsiveness in allergen-sensitized mice. *Allergy* **63**:438.

Sample(s) Tested: mouse BALF.

Guilloton, F. *et al.* (2007) Granzyme B induction signalling pathway in acute myeloid leukemia cell lines stimulated by tumor necrosis factor- α and Fas ligand. *Cell. Signal.* **19**:1132.

Sample(s) Tested: Neuro-2a mouse neuroblastoma cell culture supernate.

FABP1/L-FABP**Human FABP1/L-FABP ELISA**Catalog # **Z-001**

Sensitivity: 3 ng/mL

Range: 6.25-400 ng/mL

Sample Volume: 50 μ L

Validated Sample Type(s): urine.

Yokoyama, T. *et al.* (2009) Urinary excretion of liver type fatty acid binding protein accurately reflects the degree of tubulointerstitial damage. *Am. J. Pathol.* **174**:2096.

Sample(s) Tested: human L-FABP, transgenic mouse urine and homogenized kidney tissue.

 α -Fetoprotein/AFP**Quantikine Human α -Fetoprotein ELISA**Catalog # **DAFP00**

Sensitivity: 0.046 ng/mL

Range: 0.312-20 ng/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Tanaka, Y. *et al.* (2006) A novel approach and protocol for discovering extremely low-abundance proteins in serum. *Proteomics* **6**:4845.

Sample(s) Tested: human serum.

Wu, F. *et al.* (2009) Identifying serological biomarkers of hepatocellular carcinoma using surface-enhanced laser desorption/ionization-time-of-flight mass spectroscopy. *Cancer Lett.* **279**:163.

Sample(s) Tested: human serum.

FGF acidic**Quantikine Human FGF acidic ELISA**Catalog # **DFA00B**

Sensitivity: 13.9 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

Herrmann, S. *et al.* (2006) Quantitative assessment of growth factors in reaming aspirate, iliac crest, and platelet preparation. *Bone* **39**:1156.

Sample(s) Tested: homogenized human iliac crest and reaming debris tissue, human plasma.

Beck, L.A. *et al.* (2006) Functional analysis of the chemokine receptor CCR3 on airway epithelial cells. *J. Immunol.* **177**:3344.

Sample(s) Tested: BEAS-2B human airway epithelial cell culture supernate.

Sherman, J.A. *et al.* (2006) Humoral and cellular factors responsible for coronary collateral formation. *Am. J. Cardiol.* **98**:1194.

Sample(s) Tested: human plasma (heparin).



FGF basic

Quantikine Human FGF basic ELISA

Catalog # **DFB50***

Sensitivity: 3 pg/mL

Range: 10–640 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Bae, Y.H. *et al.* (2009) Upregulation of fibroblast growth factor-2 by visfatin that promotes endothelial angiogenesis. *Biochem. Biophys. Res. Commun.* **379**:206.

Sample(s) Tested: human umbilical vein endothelial cell and human mammary endothelial cell culture supernates.

Clyne, A.M. *et al.* (2008) Elevated fibroblast growth factor-2 increases tumor necrosis factor- α -induced endothelial cell death in high glucose. *J. Cell. Physiol.* **217**:86.

Sample(s) Tested: porcine endothelial cell culture supernate.

Wong-Goodrich, S.J. *et al.* (2008) Prenatal choline supplementation attenuates neuropathological response to status epilepticus in the adult rat hippocampus. *Neurobiol. Dis.* **30**:255.

Sample(s) Tested: homogenized rat hippocampal tissue.

Nakano, Y. *et al.* (2008) Connexin43 knockdown accelerates wound healing but inhibits mesenchymal transition after corneal endothelial injury *in vivo*. *Invest. Ophthalmol. Vis. Sci.* **49**:93.

Sample(s) Tested: rat aqueous humor.

Lu, J. *et al.* (2007) Electronegative LDL impairs vascular endothelial cell integrity in diabetes by disrupting fibroblast growth factor 2 (FGF2) autoregulation. *Diabetes* **57**:158.

Sample(s) Tested: bovine aortic endothelial cell culture supernate.

Quantikine HS Human FGF basic ELISA

Catalog # **HSFB00D***

Sensitivity: 0.07 pg/mL

Range: 0.313–20 pg/mL

Sample Volume: 150 µL

Validated Sample Type(s): plasma (citrate, EDTA), serum, urine.

Kanter, J. *et al.* (2008) Oncogenic and angiogenic growth factors accumulate during routine storage of apheresis platelet concentrates. *Clin. Cancer Res.* **14**:3942.

Sample(s) Tested: human plasma, human platelet-poor plasma, human platelet concentrate.

Weiner, L. *et al.* (2007) Dedicated epithelial recipient cells determine pigmentation patterns. *Cell* **130**:932.

Sample(s) Tested: mouse keratinocyte cell culture supernate.

Schneider, P. *et al.* (2007) Endostatin variations in childhood acute lymphoblastic leukemia comparison with basic fibroblast growth factor and vascular endothelial growth factor. *Leuk. Res.* **31**:629.

Sample(s) Tested: human urine, human plasma (citrate), human peripheral blood mononuclear cell culture supernate.

Ishida, M. *et al.* (2007) Estrogen actions on lactotroph proliferation are independent of a paracrine interaction with other pituitary cell types: a study using lactotroph-enriched cells. *Endocrinology* **148**:3131.

Sample(s) Tested: rat pituitary cell culture supernate.

Bourlev, V. *et al.* (2006) Elevated levels of fibroblast growth factor-2 in serum from women with endometriosis. *Am. J. Obstet. Gynecol.* **194**:755.

Sample(s) Tested: human peritoneal fluid, human serum.

FGF-19

Quantikine Human FGF-19 ELISA

Catalog # **DF1900**

Sensitivity: 3.35 pg/mL

Range: 15.6–1000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Song, K-H. *et al.* (2009) Bile acids activate fibroblast growth factor 19 signaling in human hepatocytes to inhibit cholesterol 7 α -hydroxylase gene expression. *Hepatology* **49**:297.

Sample(s) Tested: human hepatocyte cell culture supernate.

FGF-21

Quantikine Human FGF-21 ELISA

Catalog # **DF2100**

Sensitivity: 8.69 pg/mL

Range: 31.3–2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Quantikine Mouse FGF-21 ELISA

Catalog # **MF2100**

Sensitivity: 13.4 pg/mL

Range: 31.3–2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

FIt-3 Ligand

Quantikine Human FIt-3 Ligand ELISA

Catalog # **DFK00**

Sensitivity: 7 pg/mL

Range: 15.6–1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Hatfield, K. *et al.* (2006) Microvascular endothelial cells increase proliferation and inhibit apoptosis of native human acute myelogenous leukemia blasts. *Int. J. Cancer* **119**:2313.

Sample(s) Tested: human acute myelogenous leukemia blast cell culture supernate.

Lim, W.H. *et al.* (2006) Renal transplantation reverses functional deficiencies in circulating dendritic cell subsets in chronic renal failure patients. *Transplantation* **81**:160.

Sample(s) Tested: human serum.

Curtin, J.F. *et al.* (2006) Fms-like tyrosine kinase 3 ligand recruits plasmacytoid dendritic cells to the brain. *J. Immunol.* **176**:3566.

Sample(s) Tested: human dendritic cell and plasmacytoid dendritic cell culture supernates, human serum, and homogenized human brain tissue.

Quantikine Mouse FIt-3 Ligand ELISA

Catalog # **MFK00**

Sensitivity: 5 pg/mL

Range: 31.2–2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, mouse serum, rat serum.

Li, L. *et al.* (2008) Knock-in of an internal tandem duplication mutation into murine FLT3 confers myeloproliferative disease in a mouse model. *Blood* **111**:3849.

Sample(s) Tested: mouse serum.

Flt-3 Ligand continued

Triccas, J.A. *et al.* (2007) Effects of DNA- and *Mycobacterium bovis* BCG-based delivery of the Flt3 ligand on protective immunity to *Mycobacterium tuberculosis*. *Infect. Immun.* **75**:5368.

Sample(s) Tested: cell culture supernate from HEK293 human embryonic kidney cells transfected with mouse Flt-3 ligand.

Curtin, J.F. *et al.* (2006) Fms-like tyrosine kinase 3 ligand recruits plasmacytoid dendritic cells to the brain. *J. Immunol.* **176**:3566.

Sample(s) Tested: rat dendritic cell and plasmacytoid dendritic cell culture supernates, rat serum, homogenized rat brain tissue.

Follistatin**Quantikine Human Follistatin ELISA**Catalog # **DFN00**

Sensitivity: 83 pg/mL

Range: 250-16,000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, follicular fluid, plasma (EDTA), serum.

Weigert, J. *et al.* (2009) Adiponectin upregulates monocyte activin A but systemic levels are not altered in obesity or type 2 diabetes. *Cytokine* **45**:86.

Sample(s) Tested: human monocyte cell culture supernate.

Eijken, M. *et al.* (2007) The activin A-follistatin system: potent regulator of human extracellular matrix mineralization. *FASEB J.* **21**:2949.

Sample(s) Tested: human osteoblast cell culture supernate.

Miller, T.M. *et al.* (2006) Gene transfer demonstrates that muscle is not a primary target for non-cell-autonomous toxicity in familial amyotrophic lateral sclerosis. *Proc. Natl. Acad. Sci. U.S.A.* **103**:19546.

Sample(s) Tested: mouse serum.

Leal, A.M.O. *et al.* (2002) Effect of adenovirus-mediated overexpression of follistatin and extracellular domain of activin receptor type II on gonadotropin secretion *in vitro* and *in vivo*. *Endocrinology* **143**:964.

Sample(s) Tested: rat serum.

FRS2**Cell-Based ELISA Human/Mouse/Rat Phospho-FRS2 (Y436)**Catalog # **KCB5126**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.

Galectin-3**Quantikine Human Galectin-3 ELISA**Catalog # **DGAL30**

Sensitivity: 0.085 ng/mL

Range: 0.313-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Gas6**Quantikine Human Gas6 ELISA**Catalog # **DGAS60**

Sensitivity: 7.7 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

G-CSF**Quantikine Human G-CSF ELISA**Catalog # **DCS50***

Sensitivity: 20 pg/mL

Range: 39-2500 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Ankersmit, H.J. *et al.* (2009) Irradiated cultured apoptotic peripheral blood mononuclear cells regenerate infarcted myocardium. *Eur. J. Clin. Invest.* **39**:445.

Sample(s) Tested: human peripheral blood mononuclear cell culture supernate.

Makam, M. *et al.* (2009) Activation of critical, host-induced, metabolic and stress pathways marks neutrophil entry into cystic fibrosis lungs. *Proc. Natl. Acad. Sci. U.S.A.* **106**:5779.

Sample(s) Tested: human plasma, human sputum.

Niederfuhr, A. *et al.* (2008) *Staphylococcus aureus* in nasal lavage and biopsy of patients with chronic rhinosinusitis. *Allergy* **63**:1359.

Sample(s) Tested: human nasal lavage.

Rojahn, A. *et al.* (2008) Does granulocyte colony-stimulating factor ameliorate the proinflammatory response in human meningococcal septic shock? *Crit. Care Med.* **36**:2583.

Sample(s) Tested: human plasma (heparin).

Quantikine HS Human G-CSF ELISACatalog # **HSTCS0***

Sensitivity: 4.62 pg/mL

Range: 4.69-300 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Quantikine Mouse G-CSF ELISACatalog # **MCS00**

Sensitivity: 5 pg/mL

Range: 14.1-900 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum.

Gomez, J.C. *et al.* (2008) The role of Rac2 in regulating neutrophil production in the bone marrow and circulating neutrophil counts. *Am. J. Pathol.* **173**:507.

Sample(s) Tested: mouse plasma (heparin).

Gregory, A.D. *et al.* (2007) Regulation of systemic and local neutrophil responses by G-CSF during pulmonary *Pseudomonas aeruginosa* infection. *Blood* **109**:3235.

Sample(s) Tested: mouse lung epithelial lining fluid.

Capoccia, B.J. *et al.* (2006) G-CSF and AMD3100 mobilize monocytes into the blood that stimulate angiogenesis *in vivo* through a paracrine mechanism. *Blood* **108**:2438.

Sample(s) Tested: mouse serum.



GDF-15

Quantikine Human GDF-15 ELISA

Catalog # **DGD150**

Sensitivity: 4.4 pg/mL

Range: 23.4-1500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

Ashby, D.R. *et al.* (2009) Plasma hepcidin levels are elevated but responsive to erythropoietin therapy in renal disease. *Kidney Int.* **75**:976.

Sample(s) Tested: human plasma.

GM-CSF

Quantikine Human GM-CSF ELISA

Catalog # **DGM00***

Sensitivity: 3 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Ankersmit, H.J. *et al.* (2009) Irradiated cultured apoptotic peripheral blood mononuclear cells regenerate infarcted myocardium. *Eur. J. Clin. Invest.* **39**:445.

Sample(s) Tested: human peripheral blood mononuclear cell culture supernate.

Hartl, D. *et al.* (2008) Infiltrated neutrophils acquire novel chemokine receptor expression and chemokine responsiveness in chronic inflammatory lung diseases. *J. Immunol.* **181**:8053.

Sample(s) Tested: human BALF, human synovial fluid.

Aranha, C.C. *et al.* (2008) Assessment of cervicovaginal cytokine levels following exposure to microbicide Nisin gel in rabbits. *Cytokine* **43**:63.

Sample(s) Tested: rabbit cervicovaginal lavage, rabbit vaginal tissue explant cell culture supernate.

Makowska, J.S. *et al.* (2007) Systemic responses after bronchial aspirin challenge in sensitive patients with asthma. *J. Allergy Clin. Immunol.* **121**:348.

Sample(s) Tested: human serum.

Zhang, A.L. *et al.* (2007) Natural killer cells trigger differentiation of monocytes into dendritic cells. *Blood* **110**:2484.

Sample(s) Tested: human monocyte cell culture supernate.

Quantikine HS Human GM-CSF ELISA

Catalog # **HSGM0**

Sensitivity: 0.26 pg/mL

Range: 1-64 pg/mL (serum/plasma), 0.5-32 pg/mL (urine)

Sample Volume: 150 µL (serum/plasma), 200 µL (urine)

Validated Sample Type(s): plasma (EDTA, heparin), serum, urine.

Grann, V.R. *et al.* (2008) Duffy (Fy), DARC, and neutropenia among women from the United States, Europe and the Caribbean. *Br. J. Haematol.* **143**:288.

Sample(s) Tested: human plasma (citrate).

Rafat, N. *et al.* (2007) Increased circulating endothelial progenitor cells in septic patients: correlation with survival. *Crit. Care Med.* **35**:1677.

Sample(s) Tested: human serum.

Kramer, B.W. *et al.* (2007) Endotoxin-induced maturation of monocytes in preterm fetal sheep lung. *Am. J. Physiol. Lung Cell Mol. Physiol.* **293**:L345.

Sample(s) Tested: sheep BALF, homogenized sheep fetal lung tissue, sheep amniotic fluid, sheep plasma.

Quantikine Mouse GM-CSF ELISA

Catalog # **MGM00***

Sensitivity: 5.8 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum.

Robinson, M. *et al.* (2009) Novel immunocompetent murine tumor model for evaluation of conditionally replication-competent (oncolytic) murine adenoviral vectors. *J. Virol.* **83**:3450.

Sample(s) Tested: homogenized mouse tumor tissue.

Niki, Y. *et al.* (2007) Administration of cyclooxygenase-2 inhibitor reduces joint inflammation but exacerbates osteopenia in IL-1 α transgenic mice due to GM-CSF overproduction. *J. Immunol.* **179**:639.

Sample(s) Tested: mouse primary osteoblast cell culture supernate.

Koya, R.C. *et al.* (2007) Lentiviral vector-mediated autonomous differentiation of mouse bone marrow cells into immunologically potent dendritic cell vaccines. *Mol. Ther.* **15**:971.

Sample(s) Tested: mouse serum.

Quantikine Rat GM-CSF ELISA

Catalog # **RGM00**

Sensitivity: 2.1 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum.

cGMP

Parameter Multi-species cGMP Assay

Catalog # **KGE003***

Sensitivity: 3.06 pmol/L

Range: 2.1-500 pmol/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, cell lysate, plasma (EDTA), saliva, urine.

Little, J.A. *et al.* (2009) Hematologic, biochemical, and cardiopulmonary effects of L-arginine supplementation or phosphodiesterase 5 inhibition in patients with sickle cell disease who are on hydroxyurea therapy. *Eur. J. Haematol.* **82**:315.

Sample(s) Tested: human plasma.

Lema, G. *et al.* (2009) Decreased nitric oxide products in the urine of patients undergoing cardiac surgery. *J. Cardiothorac. Vasc. Anesth.* **23**:188.

Sample(s) Tested: human urine.

Tradtrantip, L. *et al.* (2009) Thiophenecarboxylate suppressor of cyclic nucleotides discovered in a small-molecule screen blocks toxin-induced intestinal fluid secretion. *Mol. Pharmacol.* **75**:134.

Sample(s) Tested: Chinese hamster ovary cell, Fisher rat thyroid cell, and canine kidney MDCK cell lysates.

Haramis, G. *et al.* (2008) cGMP-independent anti-tumour actions of the inhibitor of soluble guanylyl cyclase, ODC, in prostate cancer cell lines. *Br. J. Pharmacol.* **155**:804.

Sample(s) Tested: LNCaP human prostate cancer cell culture supernate.

gp130

Quantikine Human Soluble gp130 ELISA

Catalog # **DGP00**

Sensitivity: 0.05 ng/mL (cell culture supernate), 0.08 ng/mL (serum/plasma)
 Range: 0.125-8 ng/mL (cell culture supernate), 0.25-16 ng/mL (serum/plasma)
 Sample Volume: 100 μ L
 Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Perez-Andres, M. *et al.* (2009) Soluble and membrane levels of molecules involved in the interaction between clonal plasma cells and the immunological microenvironment in multiple myeloma and their association with the characteristics of the disease. *Int. J. Cancer* **124**:367.

Sample(s) Tested: human plasma.

Richards, P.J. *et al.* (2006) Functional characterization of a soluble gp130 isoform and its therapeutic capacity in an experimental model of inflammatory arthritis. *Arthritis Rheum.* **54**:1662.

Sample(s) Tested: human serum, human synovial fluid.

Lazzeri, E. *et al.* (2005) High CXCL10 expression in rejected kidneys and predictive role of pretransplant serum CXCL10 for acute rejection and chronic allograft nephropathy. *Transplantation* **79**:1215.

Sample(s) Tested: human serum.

Lukashevich, I.S. *et al.* (2003) Arenavirus-mediated liver pathology: acute lymphocytic choriomeningitis virus infection of rhesus macaques is characterized by high-level interleukin-6 expression and hepatocyte proliferation. *J. Virol.* **77**:1727.

Sample(s) Tested: rhesus macaque plasma.

Growth Hormone

Quantikine Human Growth Hormone ELISA

Catalog # **DGH00**

Sensitivity: 7.18 pg/mL
 Range: 25-1600 pg/mL
 Sample Volume: 50 μ L
 Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Helsby, N.A. *et al.* (2008) CYP2C19 pharmacogenetics in advanced cancer: compromised function independent of genotype. *Br. J. Cancer* **99**:1251.

Sample(s) Tested: human serum.

GSK-3 α / β

Cell-Based ELISA Human/Mouse Phospho-GSK-3 α / β (S21/S9)

Catalog # **KCB1590**

Sample Volume: 100 μ L
 Validated Sample Type(s): whole cells.

HGF

Quantikine Human HGF ELISA

Catalog # **DHG00***

Sensitivity: 40 pg/mL
 Range: 125-8000 pg/mL
 Sample Volume: 50 μ L
 Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA), serum.

Ma, J. *et al.* (2009) Somatic mutation and functional polymorphism of a novel regulatory element in the HGF gene promoter causes its aberrant expression in human breast cancer. *J. Clin. Invest.* **119**:478.

Sample(s) Tested: homogenized human normal and cancerous breast tissue.

Wader, K.F. *et al.* (2008) Elevated serum concentrations of activated hepatocyte growth factor activator in patients with multiple myeloma. *Eur. J. Haematol.* **81**:380.

Sample(s) Tested: human serum.

Hatfield, K.J. *et al.* (2007) Release of angiopoietin-1 by primary human acute myelogenous leukemia cells is associated with mutations of nucleophosmin, increased by bone marrow stromal cells and possibly antagonized by high systemic angiopoietin-2 levels. *Leukemia* **22**:287.

Sample(s) Tested: human acute myelogenous leukemia cell culture supernate.

HGF R

Cell-Based ELISA Human Phospho-HGF R/c-Met (Y1234/Y1235)

Catalog # **KCB2480**

Sample Volume: 100 μ L
 Validated Sample Type(s): whole cells.

HIF-1 α

Cell-Based ELISA Human/Mouse Total HIF-1 α

Catalog # **KCB1935**

Sample Volume: 100 μ L
 Validated Sample Type(s): whole cells.

Surveyor IC Human/Mouse Total HIF-1 α ELISA

Catalog # **SUV1935**

Range: 125-8000 pg/mL
 Sample Volume: 100 μ L
 Validated Sample Type(s): cell lysate.

Dai, Y. *et al.* (2007) HIF-1 α induced-VEGF overexpression in bone marrow stem cells protects cardiomyocytes against ischemia. *J. Mol. Cell. Cardiol.* **42**:1036.

Sample(s) Tested: mouse bone marrow stem cell lysate.

Histone H2AX

Cell-Based ELISA Human/Mouse/Rat Phospho-Histone H2AX (S139)

Catalog # **KCB2288**

Sample Volume: 100 μ L
 Validated Sample Type(s): whole cells.



HSP27

Cell-Based ELISA Human/Mouse Phospho-HSP27 (S78/S82)

Catalog # **KCB2314**

Sample Volume: 100 μ L
Validated Sample Type(s): whole cells.

Surveyor IC Human/Mouse/Rat Phospho-HSP27 (S78/S82) ELISA

Catalog # **SUV2314**

Range: 62.5-4000 pg/mL
Sample Volume: 100 μ L
Validated Sample Type(s): cell lysate.

HSP70

Cell-Based ELISA Human/Mouse Total HSP70

Catalog # **KCB1663**

Sample Volume: 100 μ L
Validated Sample Type(s): whole cells.

Surveyor IC Human/Mouse/Rat Total HSP70 ELISA

Catalog # **SUV1663**

Range: 156-10,000 pg/mL
Sample Volume: 100 μ L
Validated Sample Type(s): cell lysate.

Zhou, F. *et al.* (2008) Dynamics and mechanism of HSP70 translocation induced by photodynamic therapy treatment. *Cancer Lett.* **264**:135.

Sample(s) Tested: HeLa human cervical epithelial carcinoma cell lysate.

ICAM-1/CD54

Quantikine Human Soluble ICAM-1/CD54 ELISA

Catalog # **DCD540***

Sensitivity: 0.254 ng/mL
Range: 1.56-50 ng/mL
Sample Volume: 100 μ L
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Pinto, A. *et al.* (2009) Immuno-inflammatory predictors of stroke at follow-up in patients with chronic non-valvular atrial fibrillation (NVAf). *Clin. Sci.* **116**:781.

Sample(s) Tested: human plasma (citrate).

Kourea, K. *et al.* (2007) Effects of darbepoetin-alpha on plasma pro-inflammatory cytokines, anti-inflammatory cytokine interleukin-10 and soluble Fas/Fas ligand system in anemic patients with chronic heart failure. *Atherosclerosis* **199**:215.

Sample(s) Tested: human plasma (EDTA).

Khanolkar, M.P. *et al.* (2007) Rosiglitazone produces a greater reduction in circulating platelet activity compared with gliclazide in patients with type 2 diabetes mellitus - an effect probably mediated by direct platelet PPAR γ activation. *Atherosclerosis* **197**:718.

Sample(s) Tested: human serum.

Quantikine Mouse Soluble ICAM-1/CD54 ELISA

Catalog # **MIC100**

Sensitivity: 0.057 ng/mL
Range: 0.31-20 ng/mL
Sample Volume: 50 μ L
Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenate.

Kharabi Masouleh, B. *et al.* (2009) Role of the heparan sulfate proteoglycan syndecan-1 (CD138) in delayed-type hypersensitivity. *J. Immunol.* **182**:4985.

Sample(s) Tested: homogenized mouse ear tissue.

Bro, S. *et al.* (2008) A neutralizing antibody against receptor for advanced glycation end products (RAGE) reduces atherosclerosis in uremic mice. *Atherosclerosis* **201**:274.

Sample(s) Tested: mouse plasma (EDTA).

Izumi-Nagai, K. *et al.* (2007) Macular pigment lutein is antiinflammatory in preventing choroidal neovascularization. *Arterioscler. Thromb. Vasc. Biol.* **27**:2555.

Sample(s) Tested: b-End 3 mouse brain-derived capillary endothelial cell culture supernate, homogenized mouse RPE-choroid complex tissue.

Quantikine Rat Soluble ICAM-1/CD54 ELISA

Catalog # **RIC100**

Sensitivity: 4.1 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μ L
Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Arita, R. *et al.* (2009) Rho kinase inhibition by fasudil ameliorates diabetes-induced microvascular damage. *Diabetes* **58**:215.

Sample(s) Tested: rat retina cell lysate.

Tarry-Adkins, J.L. *et al.* (2008) Maternal diet influences DNA damage, aortic telomere length, oxidative stress, and antioxidant defense capacity in rats. *FASEB J.* **22**:2037.

Sample(s) Tested: rat serum.

Saha, J.K. *et al.* (2007) Study of plasma protein C and inflammatory pathways: biomarkers for dimethylnitrosamine-induced liver fibrosis in rats. *Eur. J. Pharmacol.* **575**:158.

Sample(s) Tested: rat plasma (EDTA).

IFN- α

Human IFN- α ELISA

Catalog # **41100-1***

Sensitivity: 12.5 pg/mL
Range: 12.5-500 pg/mL (high sensitivity), 156-5000 pg/mL (extended range)
Sample Volume: 100 μ L
Validated Sample Type(s): cell culture supernate.

Ahlenstiel, G. *et al.* (2008) Distinct KIR/HLA compound genotypes affect the kinetics of human antiviral natural killer cell responses. *J. Clin. Invest.* **118**:1017.

Sample(s) Tested: human natural killer cell culture supernate.

Brenchley, J.M. *et al.* (2006) Microbial translocation is a cause of systemic immune activation in chronic HIV infection. *Nat. Med.* **12**:1365.

Sample(s) Tested: human plasma.

Hartmann, G. *et al.* (2005) CpG oligonucleotides induce strong humoral but only weak CD4⁺ T cell responses to protein antigens in rhesus macaques *in vivo*. *Vaccine* **23**:3310.

Sample(s) Tested: rhesus macaque peripheral blood mononuclear cell culture supernate.

IFN- α continued**Human IFN- α ELISA**Catalog # **41110-1***

Sensitivity: 12.5 pg/mL

Range: 12.5-500 pg/mL (high sensitivity), 156-5000 pg/mL (extended range)

Sample Volume: 100 μ L

Validated Sample Type(s): serum.

Cheng, G. *et al.* (2007) Alpha interferon is a powerful adjuvant for a recombinant protein vaccine against foot-and-mouth disease virus in swine, and an effective stimulus of *in vivo* immune response. *Vaccine* **25**:5199.

Sample(s) Tested: human plasma.

Yoshikawa, H. *et al.* (2006) Elevation of IL-12 p40 and its antibody in myasthenia gravis with thymoma. *J. Neuroimmunol.* **175**:169.

Sample(s) Tested: human serum.

Killian, M.S. *et al.* (2006) Similar changes in plasmacytoid dendritic cell and CD4 T cell counts during primary HIV-1 infection and treatment. *AIDS* **20**:1247.

Sample(s) Tested: human plasma (EDTA).

Human IFN- α Multi-Subtype ELISACatalog # **41105-1***

Sensitivity: 12.5 pg/mL

Range: 12.5-500 pg/mL (high sensitivity), 156-5000 pg/mL (extended range)

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate.

Nold, M.F. *et al.* (2008) Endogenous IL-32 controls cytokine and HIV-1 production. *J. Immunol.* **181**:557.

Sample(s) Tested: U1 human promonocytic cell culture supernate.

Mouse IFN- α ELISACatalog # **42100-1**

Sensitivity: 12.5 pg/mL

Range: 12.5-500 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate.

Vultaggio, A. *et al.* (2009) Modified adenine (9-benzyl-2-butoxy-8-hydroxyadenine) redirects Th2-mediated murine lung inflammation by triggering TLR7. *J. Immunol.* **182**:880.

Sample(s) Tested: mouse serum.

Paget, C. *et al.* (2007) Activation of invariant NKT cells by toll-like receptor 9-stimulated dendritic cells requires type I interferon and charged glycosphingolipids. *Immunity* **27**:597.

Sample(s) Tested: mouse DC, DC/iNKT, DC/liver MNC co-culture supernates.

Belser, J.A. *et al.* (2007) Pathogenesis of avian influenza (H7) virus infection in mice and ferrets: enhanced virulence of Eurasian H7N7 viruses isolated from humans. *J. Virol.* **81**:11139.

Sample(s) Tested: homogenized mouse lung tissue.

IFN- β **Human IFN- β ELISA**Catalog # **41410-1***

Sensitivity: 25 pg/mL

Range: 25-2000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate.

Chase, J.C. *et al.* (2009) Direct and indirect impairment of human dendritic cell function by virulent *Francisella tularensis* Schu S4. *Infect. Immun.* **77**:180.

Sample(s) Tested: human dendritic cell culture supernate.

Lee, M.T. *et al.* (2007) Interferon- β and adhesion molecules (E-selectin and s-intracellular adhesion molecule-1) are detected in sera from patients with retinal vasculitis and are induced in retinal vascular endothelial cells by Toll-like receptor 3 signalling. *Clin. Exp. Immunol.* **147**:71.

Sample(s) Tested: human serum, human retinal vascular endothelial cell culture supernate.

Emori, Y. *et al.* (2004) Inhibition of human immunodeficiency virus type 1 replication by Z-100, an immunomodulator extracted from human-type tubercle bacilli, in macrophages. *J. Gen. Virol.* **85**:2603.

Sample(s) Tested: cell culture supernate from human monocyte-derived macrophages infected with HIV-1 p24.

Mouse IFN- β ELISACatalog # **42400-1**

Sensitivity: 15.5 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, serum.

Prantner, D. & U.M. Nagarajan (2009) Role for the chlamydial type III secretion apparatus in host cytokine expression. *Infect. Immun.* **77**:76.

Sample(s) Tested: cell culture supernate from mouse macrophages infected with *C. muridarum*.

Zucchini, N. *et al.* (2007) Individual plasmacytoid dendritic cells are major contributors to the production of multiple innate cytokines in an organ-specific manner during viral infection. *Int. Immunol.* **20**:45.

Sample(s) Tested: mouse serum.

Paget, C. *et al.* (2007) Activation of invariant NKT cells by toll-like receptor 9-stimulated dendritic cells requires type I interferon and charged glycosphingolipids. *Immunity* **27**:597.

Sample(s) Tested: mouse DC, DC/iNKT, DC/liver MNC co-culture supernates.

IFN- γ **Quantikine Canine IFN- γ ELISA**Catalog # **CAIF00**

Sensitivity: 60 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Yuasa, K. *et al.* (2007) Injection of a recombinant AAV serotype 2 into canine skeletal muscles evokes strong immune responses against transgene products. *Gene Ther.* **14**:1249.

Sample(s) Tested: canine splenocyte cell culture supernate.

Fukumoto, S. *et al.* (2007) Prime-boost immunization with DNA followed by a recombinant vaccinia virus expressing P50 induced protective immunity against *Babesia gibsoni* infection in dogs. *Vaccine* **25**:1334.

Sample(s) Tested: canine serum.

**Quantikine Human IFN- γ ELISA**Catalog # **DIF50***

Sensitivity: 8 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Kalkunte, S.S. *et al.* (2009) Vascular endothelial growth factor C facilitates immune tolerance and endovascular activity of human uterine NK cells at the maternal-fetal interface. *J. Immunol.* **182**:4085.

Sample(s) Tested: human peripheral NK, and uterine CD56⁺CD3⁺ NK cell culture supernates.

Rodriguez, P.C. *et al.* (2009) Arginase I-producing myeloid-derived suppressor cells in renal cell carcinoma are a subpopulation of activated granulocytes. *Cancer Res.* **69**:1553.

Sample(s) Tested: human plasma.

Zhang, N. *et al.* (2008) Different types of T-effector cells orchestrate mucosal inflammation in chronic sinus disease. *J. Allergy Clin. Immunol.* **122**:961.

Sample(s) Tested: homogenized human nasal polyp tissue.

Kristjansson, J. *et al.* (2005) Respiratory syncytial virus and other respiratory viruses during the first 3 months of life promote a local TH2-like response. *J. Allergy Clin. Immunol.* **116**:805.

Sample(s) Tested: human nasopharyngeal secretions.

Quantikine Mouse IFN- γ ELISACatalog # **MIF00***

Sensitivity: 2 pg/mL

Range: 9.4-600 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, serum.

Shinagawa, K. *et al.* (2009) A severe deficiency of coagulation factor VIIa results in attenuation of the asthmatic response in mice. *Am. J. Physiol. Lung Cell Mol. Physiol.* **296**:L763.

Sample(s) Tested: mouse BALF.

Siegemund, S. *et al.* (2009) Differential IL-23 requirement for IL-22 and IL-17A production during innate immunity against *Salmonella enterica* serovar Enteritidis. *Int. Immunol.* **21**:555.

Sample(s) Tested: mouse peritoneal exudate cell culture supernate, mouse serum, mouse peritoneal lavage.

Venkatachalam, K. *et al.* (2009) Neutralization of interleukin-18 ameliorates ischemia/reperfusion-induced myocardial injury. *J. Biol. Chem.* **284**:7853.

Sample(s) Tested: mouse cardiomyocyte cell culture supernate.

Besin, G. *et al.* (2008) Thymic stromal lymphopoietin and thymic stromal lymphopoietin-conditioned dendritic cells induce regulatory T cell differentiation and protection of NOD mice against diabetes. *Diabetes* **57**:2107.

Sample(s) Tested: mouse CD4⁺ and CD8⁺ T cell culture supernates.

Quantikine Porcine IFN- γ ELISACatalog # **PIF00**

Sensitivity: 11.2 pg/mL

Range: 39-2500 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Wall, R. *et al.* (2009) Metabolic activity of the enteric microbiota influences the fatty acid composition of murine and porcine liver and adipose tissues. *Am. J. Clin. Nutr.* **89**:1393.

Sample(s) Tested: porcine lamina propria lymphocyte cell culture supernate.

Thorgersen, E.B. *et al.* (2009) Inhibition of complement and CD14 attenuates the *Escherichia coli*-induced inflammatory response in porcine whole blood. *Infect. Immun.* **77**:725.

Sample(s) Tested: porcine plasma.

Saethre, M. *et al.* (2008) Cytokine secretion depends on Gal α (1,3)Gal expression in a pig-to-human whole blood model. *J. Immunol.* **180**:6346.

Sample(s) Tested: porcine aortic endothelial cell culture supernate.

Kruse, R. *et al.* (2008) Blood concentrations of the cytokines IL-1 β , IL-6, IL-10, TNF- α and IFN- γ during experimentally induced swine dysentery. *Acta Vet. Scand.* **50**:32.

Sample(s) Tested: porcine serum.

Quantikine Rat IFN- γ ELISACatalog # **RIF00***

Sensitivity: 10 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, serum.

Hu, A.P. *et al.* (2008) Oridonin promotes CD4⁺/CD25⁺ Treg differentiation, modulates Th1/Th2 balance and induces HO-1 in rat splenic lymphocytes. *Inflamm. Res.* **57**:163.

Sample(s) Tested: rat Th1 cell culture supernate.

Stevenson, C.S. *et al.* (2007) Comprehensive gene expression profiling of rat lung reveals distinct acute and chronic responses to cigarette smoke inhalation. *Am. J. Physiol. Lung Cell Mol. Physiol.* **293**:L1183.

Sample(s) Tested: rat BALF, homogenized rat lung tissue.

Sheikh, N. *et al.* (2007) Changes of gene expression of iron regulatory proteins during turpentine oil-induced acute-phase response in the rat. *Lab. Invest.* **87**:713.

Sample(s) Tested: rat serum.

IFN- ω **Human IFN- ω ELISA**Catalog # **41395-1**

Sensitivity: 5 pg/mL

Range: 5-300 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

IGF-I**Quantikine Human IGF-I ELISA**Catalog # **DG100***

Sensitivity: 0.056 ng/mL

Range: 0.094-6 ng/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Eckstein, N. *et al.* (2009) Hyperactivation of the insulin-like growth factor receptor I signaling pathway is an essential event for cisplatin resistance of ovarian cancer cells. *Cancer Res.* **69**:2996.

Sample(s) Tested: A2780 human ovarian cancer cell culture supernate.

Giannini, S. *et al.* (2008) Intermittent high glucose concentrations reduce neuronal precursor survival by altering the IGF system: the involvement of the neuroprotective factor DHCR24 (Seladin-1). *J. Endocrinol.* **198**:523.

Sample(s) Tested: human fetal neuroepithelial cell culture supernate.

IGF-I continued

Ashare, A. *et al.* (2008) Insulin-like growth factor-1 improves survival in sepsis via enhanced hepatic bacterial clearance. *Am. J. Respir. Crit. Care Med.* **178**:149.

Sample(s) Tested: human serum.

Wong-Goodrich, S.J. *et al.* (2008) Prenatal choline supplementation attenuates neuropathological response to status epilepticus in the adult rat hippocampus. *Neurobiol. Dis.* **30**:255.

Sample(s) Tested: homogenized rat hippocampal tissue.

Asimakopoulos, B. *et al.* (2007) The levels of steroid hormones and cytokines in individual follicles are not associated with the fertilization outcome after intracytoplasmic sperm injection. *Fertil. Steril.* **90**:60.

Sample(s) Tested: human follicular fluid.

Quantikine Mouse/Rat IGF-I ELISA**Catalog # MG100***

Sensitivity: 8.4 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenates.

Wong-Goodrich, S.J. *et al.* (2008) Spatial memory and hippocampal plasticity are differentially sensitive to the availability of choline in adulthood as a function of choline supply *in utero*. *Brain Res.* **1237**:153.

Sample(s) Tested: homogenized mouse hippocampal tissue.

Shen, Z. *et al.* (2008) Overexpression of human hydroxysteroid (17beta) dehydrogenase 2 induces disturbance in skeletal development in young male mice. *J. Bone Miner. Res.* **23**:1217.

Sample(s) Tested: mouse serum.

Ashare, A. *et al.* (2008) Insulin-like growth factor-1 improves survival in sepsis via enhanced hepatic bacterial clearance. *Am. J. Respir. Crit. Care Med.* **178**:149.

Sample(s) Tested: homogenized mouse liver tissue, mouse serum.

Pulichino, A.M. *et al.* (2008) Identification of transforming growth factor-β1-driven genetic programs of acute lung fibrosis. *Am. J. Respir. Cell Mol. Biol.* **39**:324.

Sample(s) Tested: human BALF.

Lanz, T.A. *et al.* (2007) Peripheral elevation of IGF-I fails to alter Abeta clearance in multiple *in vivo* models. *Biochem. Pharmacol.* **75**:1093.

Sample(s) Tested: rat plasma (EDTA).

IGFBP-3**Quantikine Human IGFBP-3 ELISA****Catalog # DGB300***

Sensitivity: 0.14 ng/mL

Range: 0.781-50 ng/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Akhtar, S. *et al.* (2009) Grape seed proanthocyanidins inhibit the growth of human non-small cell lung cancer xenografts by targeting insulin-like growth factor binding protein-3, tumor cell proliferation, and angiogenic factors. *Clin. Cancer Res.* **15**:821.

Sample(s) Tested: human plasma (heparin).

Koga, T. *et al.* (2008) IGFBPs contribute to survival of pancreatic cancer cells under severely hypoxic conditions. *Cancer Lett.* **268**:82.

Sample(s) Tested: AsPC-1 human pancreatic cancer cell culture supernate.

Schoyer, K.D. *et al.* (2007) Serum insulin-like growth factor I (IGF-I) and IGF-binding protein 3 (IGFBP-3) in IVF patients with polycystic ovary syndrome: correlations with outcome. *Fertil. Steril.* **88**:139.

Sample(s) Tested: human serum.

Wang, T.H. *et al.* (2006) Insulin-like growth factor-II (IGF-II), IGF-binding protein-3 (IGFBP-3), and IGFBP-4 in follicular fluid are associated with oocyte maturation and embryo development. *Fertil. Steril.* **86**:1392.

Sample(s) Tested: human follicular fluid.

Quantikine Mouse IGFBP-3 ELISA**Catalog # MGB300**

Sensitivity: 16 pg/mL

Range: 78.1-5000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA).

IKB-α**Cell-Based ELISA Human Total IκB-α****Catalog # KCB4299**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.

IL-1α/IL-1F1**Quantikine Human IL-1α/IL-1F1 ELISA****Catalog # DLA50***

Sensitivity: 1 pg/mL

Range: 3.9-250 pg/mL

Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Scamuffa, N. *et al.* (2008) Selective inhibition of proprotein convertases represses the metastatic potential of human colorectal tumor cells. *J. Clin. Invest.* **118**:352.

Sample(s) Tested: HT29 human colon adenocarcinoma cell culture supernate.

Gouin, J.P. *et al.* (2007) The influence of anger expression on wound healing. *Brain Behav. Immun.* **22**:699.

Sample(s) Tested: human wound secretion.

Turner, N.A. *et al.* (2007) Mechanism of TNF-α-induced IL-1α, IL-1β and IL-6 expression in human cardiac fibroblasts: effects of statins and thiazolidinediones. *Cardiovasc. Res.* **76**:81.

Sample(s) Tested: human cardiac fibroblast cell culture supernate.

Dardik, A. *et al.* (2006) Shear stress-stimulated endothelial cells induce smooth muscle cell chemotaxis via platelet-derived growth factor-BB and interleukin-1α. *J. Vasc. Surg.* **41**:321.

Sample(s) Tested: bovine smooth muscle cell culture supernate.

Quantikine Mouse IL-1α/IL-1F1 ELISA**Catalog # MLA00**

Sensitivity: 2.5 pg/mL

Range: 4.7-300 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum.

Wagner-Ballon, O. *et al.* (2007) Proteasome inhibitor bortezomib impairs both myelofibrosis and osteosclerosis induced by high thrombopoietin levels in mice. *Blood* **110**:345.

Sample(s) Tested: mouse plasma.



Bitko, V. *et al.* (2007) Viral infection of the lungs through the eye. *J. Virol.* **81**:783.

Sample(s) Tested: homogenized mouse lung and eye tissue.

Wagner-Ballon, O. *et al.* (2006) Monocyte/macrophage dysfunctions do not impair the promotion of myelofibrosis by high levels of thrombopoietin. *J. Immunol.* **176**:6425.

Sample(s) Tested: mouse platelet cell lysates, mouse plasma (citrate).

Quantikine Rat IL-1 α /IL-1F1 ELISA

Catalog # **RRA00**

Sensitivity: 4.12 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Winnall, W.R. *et al.* (2009) Regulation of interleukin-1 α , activin and inhibin by lipopolysaccharide in Sertoli cells from prepubertal rats. *Mol. Cell. Endocrinol.* **307**:169.

Sample(s) Tested: rat Sertoli cell lysate, RIPA extracts, & cell culture supernate.

IL-1 β /IL-1F2

Quantikine Human IL-1 β /IL-1F2 ELISA

Catalog # **DLB50***

Sensitivity: 1 pg/mL

Range: 3.9-250 pg/mL

Sample Volume: 200 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Pinto, A. *et al.* (2009) Immuno-inflammatory predictors of stroke at follow-up in patients with chronic non-valvular atrial fibrillation (NVAf). *Clin. Sci.* **116**:781.

Sample(s) Tested: human plasma (citrate).

Rehani, K. *et al.* (2009) Toll-like receptor-mediated production of IL-1Ra is negatively regulated by GSK3 via the MAPK ERK1/2. *J. Immunol.* **182**:547.

Sample(s) Tested: human monocyte cell culture supernate.

Zhang, N. *et al.* (2008) Different types of T-effector cells orchestrate mucosal inflammation in chronic sinus disease. *J. Allergy Clin. Immunol.* **122**:961.

Sample(s) Tested: homogenized human nasal polyp tissue.

Holt, H.B. *et al.* (2006) Non-esterified fatty acid concentrations are independently associated with hepatic steatosis in obese subjects. *Diabetologia* **49**:141.

Sample(s) Tested: human serum.

Bouchama, A. *et al.* (2005) Experimental heatstroke in baboon: analysis of the systemic inflammatory response. *Shock* **24**:332.

Sample(s) Tested: baboon plasma (EDTA).

Quantikine Human Pro-IL-1 β /IL-1F2 ELISA

Catalog # **DLBP00**

Sensitivity: 7.2 pg/mL (cell culture supernate), 8.9 pg/mL (serum/plasma)

Range: 23.4-1500 pg/mL (cell culture supernate), 31.2-2000 pg/mL (serum/plasma)

Sample Volume: 200 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Kuijk, L.M. *et al.* (2008) HMG-CoA reductase inhibition induces IL-1 β release through Rac1/PI3K/PKB-dependent caspase-1 activation. *Blood* **112**:3563.

Sample(s) Tested: THP-1 human acute monocytic leukemia cell culture supernate.

Medeiros, M.M. *et al.* (2007) Toll-like receptor 4 (TLR4)-dependent proinflammatory and immunomodulatory properties of the glycoinositolphospholipid (GIPL) from *Trypanosoma cruzi*. *J. Leukoc. Biol.* **82**:488.

Sample(s) Tested: mouse peritoneal fluid.

Kelk, P. *et al.* (2005) Abundant secretion of bioactive interleukin-1 β by human macrophages induced by *Actinobacillus actinomycetemcomitans* leukotoxin. *Infect. Immun.* **73**:453.

Sample(s) Tested: human macrophage cell lysate.

Grygorczuk, S. *et al.* (2004) Concentrations of macrophage inflammatory proteins MIP-1 α and MIP-1 β and interleukin 8 (IL-8) in Lyme borreliosis. *Infection* **32**:350.

Sample(s) Tested: human CSF, human serum.

Quantikine HS Human IL-1 β /IL-1F2 ELISA

Catalog # **HSLB00C***

Sensitivity: 0.14 pg/mL

Range: 0.125-8 pg/mL

Sample Volume: 150 μ L

Validated Sample Type(s): plasma (EDTA, heparin), serum.

Licata, G. *et al.* (2009) Immuno-inflammatory activation in acute cardio-embolic strokes in comparison with other subtypes of ischaemic stroke. *Thromb. Haemost.* **101**:929.

Sample(s) Tested: human plasma (EDTA).

Koutouzis, M. *et al.* (2009) Serum interleukin-6 is elevated in symptomatic carotid bifurcation disease. *Acta Neurol. Scand.* **119**:119.

Sample(s) Tested: human serum.

QuantiGlo Chemiluminescent Human IL-1 β /IL-1F2 ELISA

Catalog # **QLB00B**

Sensitivity: 0.55 pg/mL

Range: 1.4-1000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Wilson, H.L. *et al.* (2007) P2X receptor characterization and IL-1/IL-1Ra release from human endothelial cells. *Br. J. Pharmacol.* **151**:115.

Sample(s) Tested: human umbilical vein endothelial cell and THP-1 human acute monocytic leukemia cell lysates.

MacKenzie, A. *et al.* (2001) Rapid secretion of interleukin-1 β by microvesicle shedding. *Immunity* **15**:825.

Sample(s) Tested: THP-1 human acute monocytic leukemia cell culture supernate.

Quantikine Mouse IL-1 β /IL-1F2 ELISA

Catalog # **MLB00B***

Sensitivity: 3 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, serum.

Tao, J.Y. *et al.* (2009) Anti-inflammatory effects of ethyl acetate fraction from *Melilotus suaveolens* Ledeb on LPS-stimulated RAW 264.7 cells. *J. Ethnopharmacol.* **123**:97.

Sample(s) Tested: RAW264.7 mouse macrophage cell culture supernate.

Siegemund, S. *et al.* (2009) Differential IL-23 requirement for IL-22 and IL-17A production during innate immunity against *Salmonella enterica* serovar Enteritidis. *Int. Immunol.* **21**:555.

Sample(s) Tested: mouse peritoneal exudate cell culture supernate, mouse serum, mouse peritoneal lavage.

Caruso, R. *et al.* (2009) Inhibition of monocyte-derived inflammatory cytokines by IL-25 occurs via p38 Map kinase-dependent induction of Socs-3. *Blood* **113**:3512.

Sample(s) Tested: mouse serum.

IL-1 β /IL-1F2 continued

Wu, M. *et al.* (2009) β -defensin-2 promotes resistance against infection with *P. aeruginosa*. *J. Immunol.* **182**:1609.

Sample(s) Tested: homogenized mouse cornea tissue.

Quantikine Porcine IL-1 β /IL-1F2 ELISACatalog # **PLB00**

Sensitivity: 10 pg/mL

Range: 19.5-1250 pg/mL

Sample Volume: 100 μ L

Validated Samples Type(s): cell culture supernate.

Wall, R. *et al.* (2009) Metabolic activity of the enteric microbiota influences the fatty acid composition of murine and porcine liver and adipose tissues. *Am. J. Clin. Nutr.* **89**:1393.

Sample(s) Tested: porcine lamina propria lymphocyte cell culture supernate.

Sibila, O. *et al.* (2008) Effects of glucocorticoids in ventilated piglets with severe pneumonia. *Eur. Respir. J.* **32**:1037.

Sample(s) Tested: porcine serum, porcine BALF.

Roesner, J.P. *et al.* (2007) The fibrin-derived peptide Bbeta15-42 is cardioprotective in a pig model of myocardial ischemia-reperfusion injury. *Crit. Care Med.* **35**:1730.

Sample(s) Tested: porcine plasma.

Quantikine Rat IL-1 β /IL-1F2 ELISACatalog # **RLB00***

Sensitivity: 5 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μ L

Validated Samples Type(s): cell culture supernate, plasma (EDTA), serum.

Mousavizadeh, K. *et al.* (2009) Anti-inflammatory effects of 5-HT receptor antagonist, tropisetron on experimental colitis in rats. *Eur. J. Clin. Invest.* **39**:375.

Sample(s) Tested: homogenized rat colon tissue.

Sun, J. *et al.* (2009) Effects of curcumin or dexamethasone on lung ischaemia-reperfusion injury in rats. *Eur. Respir. J.* **33**:398.

Sample(s) Tested: rat serum, homogenized rat lung tissue.

Barrientos, R.M. *et al.* (2009) Time course of hippocampal IL-1 β and memory consolidation impairments in aging rats following peripheral infection. *Brain Behav. Immun.* **23**:46.

Sample(s) Tested: rat serum, homogenized rat brain and spleen tissue.

Johnson, J.D. *et al.* (2008) Role of central β -adrenergic receptors in regulating proinflammatory cytokine responses to a peripheral bacterial challenge. *Brain Behav. Immun.* **22**:1078.

Sample(s) Tested: homogenized rat brain tissue, rat plasma (EDTA).

IL-1ra/IL-1F3**Quantikine Human IL-1ra/IL-1F3 ELISA**Catalog # **DRA00B***

Sensitivity: 18.3 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Kallapur, S.G. *et al.* (2009) IL-1 mediates pulmonary and systematic inflammatory responses to chorioamnionitis induced by lipopolysaccharide. *Am. J. Respir. Crit. Care Med.* **179**:955.

Sample(s) Tested: sheep amniotic fluid.

Lachmann, H.J. *et al.* (2009) *In vivo* regulation of interleukin-1 β in patients with cryopyrin-associated periodic syndromes. *J. Exp. Med.* **206**:1029.

Sample(s) Tested: human plasma.

Quantikine Mouse IL-1ra/IL-1F3 ELISACatalog # **MRA00**

Sensitivity: 13 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Rosenzweig, H.L. *et al.* (2008) Activation of NOD2 *in vivo* induces IL-1 β production in the eye via caspase-1 but results in ocular inflammation independently of IL-1 signaling. *J. Leukoc. Biol.* **84**:529.

Sample(s) Tested: homogenized mouse eye tissue, mouse plasma (heparin).

Gupta, N. *et al.* (2007) Intrapulmonary delivery of bone marrow-derived mesenchymal stem cells improves survival and attenuates endotoxin-induced acute lung injury in mice. *J. Immunol.* **179**:1855.

Sample(s) Tested: mouse BALF, mouse plasma.

Crow, A.R. *et al.* (2007) A role for IL-1 receptor antagonist or other cytokines in the acute therapeutic effects of IVIg? *Blood* **109**:155.

Sample(s) Tested: mouse serum.

Bando, T. *et al.* (2006) Complete overlap of interleukin-31 receptor A and oncostatin M receptor β in the adult dorsal root ganglia with distinct developmental expression patterns. *Neuroscience* **142**:1263.

Sample(s) Tested: mouse mesenchymal stem cell and mouse plastic adherent marrow cell culture supernates.

IL-1 RII/IL-1 R2**Quantikine Human Soluble IL-1 RII ELISA**Catalog # **DR1B00**

Sensitivity: 10 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Ma, Y. *et al.* (2007) Proteomics analysis of Hodgkin lymphoma: identification of new players involved in the cross-talk between HRS cells and infiltrating lymphocytes. *Blood* **111**:2339.

Sample(s) Tested: L428 glandular bud epithelial cell, L1236 human Hodgkin's lymphoma cell, and KM-H2 human prostate cancer cell culture supernates, human plasma.

Wilson, H.L. *et al.* (2007) P2X receptor characterization and IL-1/IL-1Ra release from human endothelial cells. *Br. J. Pharmacol.* **151**:115.

Sample(s) Tested: human umbilical vein endothelial cell culture supernate and cell lysate.

Lindberg, C. *et al.* (2005) Soluble interleukin-1 receptor type II, IL-18 and caspase-1 in mild cognitive impairment and severe Alzheimer's disease. *Neurochem. Int.* **46**:551.

Sample(s) Tested: human serum.

Kaneyama, K. *et al.* (2005) Levels of soluble cytokine factors in temporomandibular joint effusions seen on magnetic resonance images. *Oral Surg. Oral Med. Oral Pathol. Oral Radiol. Endod.* **99**:411.

Sample(s) Tested: human synovial fluid.



IL-2

Quantikine Human IL-2 ELISA

Catalog # **D2050***

Sensitivity: 7 pg/mL

Range: 31.2-2000 pg/mL

Samples Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Printza, N. *et al.* (2008) IL-18 is correlated with type-2 immune response in children with steroid sensitive nephrotic syndrome. *Cytokine* **44**:262.

Sample(s) Tested: human serum.

Kremlev, S.G. *et al.* (2008) Angiocidin promotes pro-inflammatory cytokine production and antigen presentation in multiple sclerosis. *J. Neuroimmunol.* **194**:132.

Sample(s) Tested: human monocyte cell culture supernate.

Ito, T. *et al.* (2008) Two functional subsets of FOXP3⁺ regulatory T cells in human thymus and periphery. *Immunity* **28**:870.

Sample(s) Tested: human T cell culture supernate.

Makis, A.C. *et al.* (2006) C-reactive protein and vascular cell adhesion molecule-1 as markers of severity in sickle cell disease. *Arch. Intern. Med.* **166**:366.

Sample(s) Tested: human plasma (heparin).

QuantiGlo Chemiluminescent Human IL-2 ELISA

Catalog # **Q2000B**

Sensitivity: 0.25 pg/mL

Range: 1.7-1250 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Quantikine Mouse IL-2 ELISA

Catalog # **M2000***

Sensitivity: 3 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum.

Sofra, V. *et al.* (2009) Antigen-loaded ER microsomes from APC induce potent immune responses against viral infection. *Eur. J. Immunol.* **39**:85.

Sample(s) Tested: mouse T cell culture supernate.

Palma, C. *et al.* (2008) The LTK63 adjuvant improves protection conferred by Ag85B DNA-protein prime-boosting vaccination against *Mycobacterium tuberculosis* infection by dampening IFN-γ response. *Vaccine* **26**:4237.

Sample(s) Tested: mouse splenocyte cell culture supernate.

Bullard, D.C. *et al.* (2007) Intercellular adhesion molecule-1 expression is required on multiple cell types for the development of experimental autoimmune encephalomyelitis. *J. Immunol.* **178**:851.

Sample(s) Tested: mouse splenocyte cell culture supernate.

McCubbin, M.D. *et al.* (2006) Tetrathiomolybdate is effective in a mouse model of arthritis. *J. Rheumatol.* **33**:2501.

Sample(s) Tested: mouse serum.

Quantikine Rat IL-2 ELISA

Catalog # **R2000***

Sensitivity: 15 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Foulds, L.M. *et al.* (2008) Molecular identification of lyso-glycerophosphocholines as endogenous immunosuppressives in bovine and rat gonadal fluids. *Biol. Reprod.* **79**:525.

Sample(s) Tested: rat T cell culture supernate.

Wajcikowski, J. *et al.* (2008) Regulation of liver cytochrome P450 by activation of brain dopaminergic system: physiological and pharmacological implications. *Biochem. Pharmacol.* **76**:258.

Sample(s) Tested: rat plasma.

Schubert, T. & R.E. Horch (2004) Insulin treatment improves hepatic morphology and function through modulation of hepatic signals after severe trauma. *Ann. Surg.* **240**:340.

Sample(s) Tested: homogenized rat liver tissue.

IL-2 Rα

Quantikine Human Soluble IL-2 Rα ELISA

Catalog # **DR2A00***

Sensitivity: 10 pg/mL

Range: 78.1-5000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Chen, J. *et al.* (2009) Effective treatment of a murine model of adult T cell leukemia using depsipeptide and its combination with unmodified daclizumab directed toward CD25. *Blood* **113**:1287.

Sample(s) Tested: mouse serum.

Zhang, N. *et al.* (2008) Different types of T-effector cells orchestrate mucosal inflammation in chronic sinus disease. *J. Allergy Clin. Immunol.* **122**:961.

Sample(s) Tested: homogenized human nasal polyp tissue.

Ratner, L. *et al.* (2007) Effect of treatment of *Strongyloides* infection on HTLV-1 expression in a patient with adult T cell leukemia. *Am. J. Hematol.* **82**:929.

Sample(s) Tested: human serum.

Sadeghi, M. *et al.* (2007) Short communication: decreasing soluble CD30 and increasing IFN-γ plasma levels are indicators of effective highly active antiretroviral therapy. *AIDS Res. Hum. Retroviruses* **23**:886.

Sample(s) Tested: human plasma.

IL-3

Quantikine Human IL-3 ELISA

Catalog # **D3000**

Sensitivity: 7.4 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Rudolph, T. *et al.* (2009) Interleukin-3 is elevated in patients with coronary artery disease and predicts restenosis after percutaneous coronary intervention. *Int. J. Cardiol.* **132**:392.

Sample(s) Tested: human serum.

IL-3 continued

Sorrentino, A. *et al.* (2008) Isolation and characterization of CD146⁺ multipotent mesenchymal stromal cells. *Exp. Hematol.* **36**:1035.

Sample(s) Tested: human mesenchymal stromal cell culture supernate.

Sadeghi, M. *et al.* (2007) Short communication: decreasing soluble CD30 and increasing IFN- γ plasma levels are indicators of effective highly active antiretroviral therapy. *AIDS Res. Hum. Retroviruses* **23**:886.

Sample(s) Tested: human plasma.

Vassina, E.M. *et al.* (2006) cIAP-2 and survivin contribute to cytokine-mediated delayed eosinophil apoptosis. *Eur. J. Immunol.* **36**:1975.

Sample(s) Tested: human serum.

Sadeghi, M. *et al.* (2005) Strong inflammatory cytokine response in male and strong anti-inflammatory response in female kidney transplant recipients with urinary tract infection. *Transpl. Int.* **18**:177.

Sample(s) Tested: human urine, human plasma.

Quantikine Mouse IL-3 ELISACatalog # **M3000**

Sensitivity: 2.5 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, serum.

Kim, J.M. *et al.* (2007) Regulatory T cells prevent catastrophic autoimmunity throughout the lifespan of mice. *Nat. Immunol.* **8**:191.

Sample(s) Tested: mouse CD4⁺T cell culture supernate.

Aiello, F.B. *et al.* (2007) IL-7 induces myelopoiesis and erythropoiesis. *J. Immunol.* **178**:1553.

Sample(s) Tested: mouse lymph node cell culture supernate.

Megid, J. *et al.* (2004) Increased interleukin-10 associated with low IL-6 concentration correlated with greater survival rates in mice infected by rabies virus vaccinated against it and immunomodulated with *P. acnes*. *Comp. Immunol. Microbiol. Infect. Dis.* **27**:393.

Sample(s) Tested: mouse serum.

IL-4**Quantikine Human IL-4 ELISA**Catalog # **D4050***

Sensitivity: 10 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Eyerich, K. *et al.* (2009) IL-17 in atopic eczema: linking allergen-specific adaptive and microbial-triggered innate immune response. *J. Allergy Clin. Immunol.* **123**:59.

Sample(s) Tested: human T cell culture supernate.

Printza, N. *et al.* (2008) IL-18 is correlated with type-2 immune response in children with steroid sensitive nephrotic syndrome. *Cytokine* **44**:262.

Sample(s) Tested: human serum.

Ito, T. *et al.* (2008) Two functional subsets of FOXP3⁺ regulatory T cells in human thymus and periphery. *Immunity* **28**:870.

Sample(s) Tested: human T cell culture supernate.

Miller, M. *et al.* (2007) Computed tomographic scan-diagnosed chronic obstructive pulmonary disease-emphysema: eotaxin-1 is associated with bronchodilator response and extent of emphysema. *J. Allergy Clin. Immunol.* **120**:1118.

Sample(s) Tested: human BALF.

Bouchama, A. *et al.* (2005) Experimental heatstroke in baboon: analysis of the systemic inflammatory response. *Shock* **24**:332.

Sample(s) Tested: baboon plasma (EDTA).

Quantikine HS Human IL-4 ELISACatalog # **HS400***

Sensitivity: 0.22 pg/mL

Range: 0.25-16 pg/mL

Sample Volume: 200 μ L

Validated Sample Type(s): cell culture supernate, serum.

Ingvarsson, J. *et al.* (2008) Detection of pancreatic cancer using antibody microarray-based serum protein profiling. *Proteomics* **8**:2211.

Sample(s) Tested: human serum.

Bozkurt, F.Y. *et al.* (2006) Anti-inflammatory cytokines in gingival crevicular fluid in patients with periodontitis and rheumatoid arthritis: a preliminary report. *Cytokine* **35**:180.

Sample(s) Tested: human gingival crevicular fluid.

Bartosik-Psujek, H. & Z. Stelmasiak (2005) Correlations between IL-4, IL-12 levels and CCL2, CCL5 levels in serum and cerebrospinal fluid of multiple sclerosis patients. *J. Neural Transm.* **112**:797.

Sample(s) Tested: human serum, human CSF.

QuantiGlo Chemiluminescent Human IL-4 ELISACatalog # **Q4000**

Sensitivity: 1 pg/mL

Range: 1.6-5000 pg/mL

Sample Volume: 150 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Wu, J.F. *et al.* (2006) Impaired T-lymphocyte proliferation function in biliary atresia patients with chronic cholestatic jaundice after a Kasai operation. *Pediatr. Res.* **60**:602.

Sample(s) Tested: human lymphocyte cell culture supernate.

Quantikine Mouse IL-4 ELISACatalog # **M4000B***

Sensitivity: 2 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, serum.

Shinagawa, K. *et al.* (2009) A severe deficiency of coagulation factor VIIa results in attenuation of the asthmatic response in mice. *Am. J. Physiol. Lung Cell Mol. Physiol.* **296**:L763.

Sample(s) Tested: mouse BALF.

Charles, N. *et al.* (2009) Lyn kinase controls basophil GATA-3 transcription factor expression and induction of Th2 cell differentiation. *Immunity* **30**:533.

Sample(s) Tested: mouse serum.

Moon, D.O. *et al.* (2008) Curcumin attenuates ovalbumin-induced airway inflammation by regulating nitric oxide. *Biochem. Biophys. Res. Commun.* **375**:275.

Sample(s) Tested: mouse BALF.



Palma, C. *et al.* (2008) The LTK63 adjuvant improves protection conferred by Ag85B DNA-protein prime-boosting vaccination against *Mycobacterium tuberculosis* infection by dampening IFN- γ response. *Vaccine* **26**:4237.

Sample(s) Tested: mouse splenocyte cell culture supernate.

Quantikine Rat IL-4 ELISA

Catalog # **R4000**

Sensitivity: 5 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, serum.

Stevenson, C.S. *et al.* (2007) Comprehensive gene expression profiling of rat lung reveals distinct acute and chronic responses to cigarette smoke inhalation. *Am. J. Physiol. Lung Cell Mol. Physiol.* **293**:L1183.

Sample(s) Tested: rat BALF, homogenized rat lung tissue.

de Oliveira, A.P. *et al.* (2007) Cellular recruitment and cytokine generation in a rat model of allergic lung inflammation are differentially modulated by progesterone and estradiol. *Am. J. Physiol. Cell Physiol.* **293**:C1120.

Sample(s) Tested: rat BALF, rat femur lavage.

Schubert, T. and R.E. Horch (2004) Insulin treatment improves hepatic morphology and function through modulation of hepatic signals after severe trauma. *Ann. Surg.* **240**:340.

Sample(s) Tested: homogenized rat liver tissue.

IL-5

Quantikine Human IL-5 ELISA

Catalog # **D5000B***

Sensitivity: 1.08 pg/mL

Range: 3.9-250 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, serum, plasma (EDTA, heparin), urine.

Quantikine Mouse IL-5 ELISA

Catalog # **M5000***

Sensitivity: 7 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, serum.

Shinagawa, K. *et al.* (2009) A severe deficiency of coagulation factor VIIa results in attenuation of the asthmatic response in mice. *Am. J. Physiol. Lung Cell Mol. Physiol.* **296**:L763.

Sample(s) Tested: mouse BALF.

Vultaggio, A. *et al.* (2009) Modified adenine (9-benzyl-2-butoxy-8-hydroxyadenine) redirects Th2-mediated murine lung inflammation by triggering TLR7. *J. Immunol.* **182**:880.

Sample(s) Tested: mouse T cell culture supernate.

O'Brien, L.M. *et al.* (2008) Eosinophil-nerve interactions and neuronal plasticity in rat gut associated lymphoid tissue (GALT) in response to enteric parasitism. *J. Neuroimmunol.* **197**:1.

Sample(s) Tested: mouse plasma, homogenized mouse colon tissue.

Alvarez, D. *et al.* (2006) Inhalation tolerance is induced selectively in thoracic lymph nodes but executed pervasively at distant mucosal and nonmucosal tissues. *J. Immunol.* **176**:2568.

Sample(s) Tested: mouse serum.

IL-6

Quantikine Canine IL-6 ELISA

Catalog # **CA6000**

Sensitivity: 11.8 pg/mL

Range: 31.3-2000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Xiong, W. *et al.* (2010) Human Flt3L generates dendritic cells from canine peripheral blood precursors: Implications for a dog glioma clinical trial. *PLoS ONE* **5**:e11074.

Sample(s) Tested: canine peripheral blood dendritic cell culture supernate.

Quantikine Human IL-6 ELISA

Catalog # **D6050***

Sensitivity: 0.7 pg/mL

Range: 3.13-300 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Hsieh, C.C. *et al.* (2009) Cerebrospinal fluid levels of interleukin-6 and interleukin-12 in children with meningitis. *Cell Stem Cell* **25**:461.

Sample(s) Tested: human CSF.

Chaput, N. *et al.* (2009) Identification of CD8⁺CD25⁺Foxp3⁺ suppressive T cells in colorectal cancer tissue. *Gut* **58**:520.

Sample(s) Tested: homogenized human colon tissue.

Niu, K.C. *et al.* (2009) Hyperbaric oxygen causes both antiinflammation and antipyresis in rabbits. *Eur. J. Pharmacol.* **606**:240.

Sample(s) Tested: rabbit serum.

Ara, T. *et al.* (2009) Interleukin-6 in the bone marrow microenvironment promotes the growth and survival of neuroblastoma cells. *Cancer Res.* **69**:329.

Sample(s) Tested: human serum, human bone marrow, human neuroblastoma cell culture supernate.

Rice, T.W. *et al.* (2006) Safety and efficacy of affinity-purified, anti-tumor necrosis factor- α , ovine fab for injection (CytoFab) in severe sepsis. *Crit. Care Med.* **34**:2271.

Sample(s) Tested: human BALF, human plasma.

Quantikine HS Human IL-6 ELISA

Catalog # **HS600B***

Sensitivity: 0.11 pg/mL

Range: 0.156-10 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): plasma (citrate, EDTA), serum, urine.

Ashby, D.R. *et al.* (2009) Plasma hepcidin levels are elevated but responsive to erythropoietin therapy in renal disease. *Kidney Int.* **75**:976.

Sample(s) Tested: human plasma.

Hamer, M. & A. Steptoe (2009) Prospective study of physical fitness, adiposity, and inflammatory markers in healthy middle-aged men and women. *Am. J. Clin. Nutr.* **89**:85.

Sample(s) Tested: human plasma.

Dasu, M.R. *et al.* (2009) Candesartan inhibits Toll-like receptor expression and activity both *in vitro* and *in vivo*. *Atherosclerosis* **202**:76.

Sample(s) Tested: human monocyte cell culture supernate.

Sun, Q. *et al.* (2008) Excessive body iron stores are not associated with risk of coronary heart disease in women. *J. Nutr.* **138**:2436.

Sample(s) Tested: human plasma.

IL-6 continued

Behndig, A.F. *et al.* (2006) Airway antioxidant and inflammatory responses to diesel exhaust exposure in healthy humans. *Eur. Respir. J.* **27**:359.

Sample(s) Tested: human BALF and bronchial wash.

QuantiGlo Chemiluminescent Human IL-6 ELISA Catalog # **Q6000B***

Sensitivity: 0.35 pg/mL

Range: 0.48-1,500 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Karlson, E.W. *et al.* (2009) Biomarkers of inflammation and development of rheumatoid arthritis in women from two prospective cohort studies. *Arthritis Rheum.* **60**:641.

Sample(s) Tested: human plasma.

Challier, J.C. *et al.* (2008) Obesity in pregnancy stimulates macrophage accumulation and inflammation in the placenta. *Placenta* **29**:274.

Sample(s) Tested: human plasma.

Lee, T.M. *et al.* (2007) Usefulness of C-reactive protein and interleukin-6 as predictors of outcomes in patients with chronic obstructive pulmonary disease receiving pravastatin. *Am. J. Cardiol.* **101**:530.

Sample(s) Tested: human plasma.

Oide, T. *et al.* (2004) Remitting seronegative symmetrical synovitis with pitting edema (RS3PE) syndrome in Nagano, Japan: Clinical, radiological, and cytokine studies of 13 patients. *Clin. Exp. Rheumatol.* **22**:91.

Sample(s) Tested: human serum, human synovial fluid.

Quantikine Mouse IL-6 ELISA Catalog # **M6000B***

Sensitivity: 1.8 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.

Earl, T.M. *et al.* (2009) Silencing of TLR4 decreases liver tumor burden in a murine model of colorectal metastasis and hepatic steatosis. *Ann. Surg. Oncol.* **16**:1043.

Sample(s) Tested: MC38 mouse colon cancer cell culture supernate and cell lysate, mouse serum.

Roelofs, J.J. *et al.* (2009) Plasminogen activator inhibitor-1 regulates neutrophil influx during acute pyelonephritis. *Kidney Int.* **75**:52.

Sample(s) Tested: homogenized mouse kidney tissue.

Mingam, R. *et al.* (2008) Uncoupling of interleukin-6 from its signalling pathway by dietary n-3-polyunsaturated fatty acid deprivation alters sickness behaviour in mice. *Eur. J. Neurosci.* **28**:1877.

Sample(s) Tested: mouse plasma (EDTA).

Zhang, H. *et al.* (2008) Endogenous hydrogen sulfide regulates inflammatory response by activating the ERK pathway in polymicrobial sepsis. *J. Immunol.* **181**:4320.

Sample(s) Tested: homogenized mouse lung and liver tissue.

Yang, S.J. *et al.* (2009) Inhibition of the chemokine (C-C motif) ligand 2/chemokine (C-C motif) receptor 2 pathway attenuates hyperglycaemia and inflammation in a mouse model of hepatic steatosis and lipotrophy. *Diabetologia* **52**:972.

Sample(s) Tested: mouse plasma.

Quantikine Porcine IL-6 ELISACatalog # **P6000**

Sensitivity: 10 pg/mL

Range: 39.1-2500 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.

Thorgersen, E.B. *et al.* (2009) Inhibition of complement and CD14 attenuates the *Escherichia coli*-induced inflammatory response in porcine whole blood. *Infect. Immun.* **77**:725.

Sample(s) Tested: porcine plasma from LPS-stimulated whole blood.

Roesner, J.P. *et al.* (2009) Bbeta15-42 (FX06) reduces pulmonary, myocardial, liver, and small intestine damage in a pig model of hemorrhagic shock and reperfusion. *Crit. Care Med.* **37**:598.

Sample(s) Tested: porcine plasma.

Sibila, O. *et al.* (2008) Effects of glucocorticoids in ventilated piglets with severe pneumonia. *Eur. Respir. J.* **32**:1037.

Sample(s) Tested: porcine serum, porcine BALF.

Jankord, R. *et al.* (2007) Sex difference in link between interleukin-6 and stress. *Endocrinology* **148**:3758.

Sample(s) Tested: porcine plasma (EDTA).

Jeng, M.J. *et al.* (2006) Effects of therapeutic bronchoalveolar lavage and partial liquid ventilation on meconium-aspirated newborn piglets. *Crit. Care Med.* **34**:1099.

Sample(s) Tested: porcine serum.

Quantikine Rat IL-6 ELISACatalog # **R6000B***

Sensitivity: 36 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Mousavizadeh, K. *et al.* (2009) Anti-inflammatory effects of 5-HT receptor antagonist, tropisetron on experimental colitis in rats. *Eur. J. Clin. Invest.* **39**:375.

Sample(s) Tested: homogenized rat colon tissue.

Wang, F.W. *et al.* (2009) Roles of activated astrocytes in bone marrow stromal cell proliferation and differentiation. *Neuroscience* **160**:319.

Sample(s) Tested: rat astrocyte cell culture supernate.

Johnson, J.D. *et al.* (2008) Role of central β -adrenergic receptors in regulating proinflammatory cytokine responses to a peripheral bacterial challenge. *Brain Behav. Immun.* **22**:1078.

Sample(s) Tested: rat plasma (EDTA), homogenized rat brain tissue.

Ding, Y. *et al.* (2008) Exploration of Emodin to treat α -naphthylisothiocyanate-induced cholestatic hepatitis via anti-inflammatory pathway. *Eur. J. Pharmacol.* **590**:377.

Sample(s) Tested: rat serum, homogenized rat liver tissue.

Wösten-van Asperen, R.M. *et al.* (2007) ACE mediates ventilator-induced lung injury in rats via angiotensin II but not bradykinin. *Eur. Respir. J.* **31**:363.

Sample(s) Tested: rat BALF.



IL-6 R

Quantikine Human Soluble IL-6 R ELISA

Catalog # **DR600***

Sensitivity: 15.1 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.

Ara, T. *et al.* (2009) Interleukin-6 in the bone marrow microenvironment promotes the growth and survival of neuroblastoma cells. *Cancer Res.* **69**:329.

Sample(s) Tested: human serum, human bone marrow, human neuroblast cell culture supernate.

Perez-Andres, M. *et al.* (2009) Soluble and membrane levels of molecules involved in the interaction between clonal plasma cells and the immunological microenvironment in multiple myeloma and their association with the characteristics of the disease. *Int. J. Cancer* **124**:367.

Sample(s) Tested: human plasma.

Shariat, S.F. *et al.* (2008) Improved prediction of disease relapse after radical prostatectomy through a panel of preoperative blood-based biomarkers. *Clin. Cancer Res.* **14**:3785.

Sample(s) Tested: human plasma (citrate).

Nishimoto, N. *et al.* (2008) Mechanisms and pathologic significances in increase in serum interleukin-6 (IL-6) and soluble IL-6 receptor after administration of an anti-IL-6 receptor antibody, tocilizumab, in patients with rheumatoid arthritis and Castleman disease. *Blood* **112**:3959.

Sample(s) Tested: human serum.

Gotohda, N. *et al.* (2006) The role of protease inhibitor against hepatectomy. *Hepato-Gastroenterology* **53**:115.

Sample(s) Tested: human plasma.

IL-7

Quantikine HS Human IL-7 ELISA

Catalog # **HS750**

Sensitivity: 0.1 pg/mL
Range: 0.156-10 pg/mL (cell culture supernate), 0.25-16 pg/mL (serum/plasma)
Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA), serum.

Louis, C.U. *et al.* (2009) Enhancing the *in vivo* expansion of adoptively transferred EBV-specific CTL with lymphodepleting CD45 monoclonal antibodies in NPC patients. *Blood* **113**:2442.

Sample(s) Tested: human plasma.

Mancebo, E. *et al.* (2008) Longitudinal analysis of immune function in the first 3 years of life in thymectomized neonates during cardiac surgery. *Clin. Exp. Immunol.* **154**:375.

Sample(s) Tested: human plasma.

Dean, R.M. *et al.* (2008) Association of serum interleukin-7 levels with the development of acute graft-versus-host disease. *J. Clin. Oncol.* **26**:5735.

Sample(s) Tested: human serum.

Rihl, M. *et al.* (2008) Identification of interleukin-7 as a candidate disease mediator in spondylarthritis. *Arthritis Rheum.* **58**:3430.

Sample(s) Tested: human synovial fluid.

Colucci, S. *et al.* (2007) Lymphocytes and synovial fluid fibroblasts support osteoclastogenesis through RANKL, TNF- α , and IL-7 in an *in vitro* model derived from human psoriatic arthritis. *J. Pathol.* **212**:47.

Sample(s) Tested: human serum, human synovial fluid.

Quantikine Mouse IL-7 ELISA

Catalog # **M7000**

Sensitivity: 8.3 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Zhu, J. *et al.* (2007) Osteoblasts support B-lymphocyte commitment and differentiation from hematopoietic stem cells. *Blood* **109**:3706.

Sample(s) Tested: mouse osteoblast cell culture supernate.

IL-10

Quantikine Canine IL-10 ELISA

Catalog # **CA1000**

Sensitivity: 3.8 pg/mL
Range: 15.6-1000 pg/mL
Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Kjelgaard-Hansen, M. *et al.* (2006) Measurement of serum interleukin-10 in the dog. *Vet. J.* **173**:361.

Sample(s) Tested: canine serum.

Quantikine Human IL-10 ELISA

Catalog # **D1000B***

Sensitivity: 3.9 pg/mL
Range: 7.8-500 pg/mL
Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Oh, J.Y. *et al.* (2009) Cytokine secretion by human mesenchymal stem cells cocultured with damaged corneal epithelial cells. *Cytokine* **46**:100.

Sample(s) Tested: human peripheral blood mononuclear cell, human mesenchymal stem cell, and human corneal epithelial cell culture supernates.

Damsgaard, C.T. *et al.* (2009) Whole-blood culture is a valid low-cost method to measure monocytic cytokines - a comparison of cytokine production in cultures of human whole-blood, mononuclear cells and monocytes. *J. Immunol. Methods* **340**:95.

Sample(s) Tested: human whole blood, peripheral blood mononuclear cell and monocyte cell culture supernates.

Zhang, N. *et al.* (2008) Different types of T-effector cells orchestrate mucosal inflammation in chronic sinus disease. *J. Allergy Clin. Immunol.* **122**:961.

Sample(s) Tested: homogenized human nasal polyp tissue.

Dhillon, N. *et al.* (2008) Phase II trial of curcumin in patients with advanced pancreatic cancer. *Clin. Cancer Res.* **14**:4491.

Sample(s) Tested: human serum.

Ädelroth, E. *et al.* (2006) Airway inflammation in iron ore miners exposed to dust and diesel exhaust. *Eur. Respir. J.* **27**:714.

Sample(s) Tested: human sputum.

IL-10 continued**Quantikine HS Human IL-10 ELISA**Catalog # **HS100B***

Sensitivity: 0.5 pg/mL

Range: 0.78-50 pg/mL

Sample Volume: 200 µL

Validated Sample Type(s): plasma (citrate, EDTA), serum.

Trøseid, M. *et al.* (2009) Interleukin-18 is a strong predictor of cardiovascular events in elderly men with the metabolic syndrome: synergistic effect of inflammation and hyperglycemia. *Diabetes Care* **32**:486.

Sample(s) Tested: human serum.

Mustea, A. *et al.* (2009) Monitoring of IL-10 in the serum of patients with advanced ovarian cancer: results from a prospective pilot-study. *Cytokine* **45**:8.

Sample(s) Tested: human serum.

Mayr, F.B. *et al.* (2008) Duffy antigen modifies the chemokine response in human endotoxemia. *Crit. Care Med.* **36**:159.

Sample(s) Tested: human plasma, human neutrophil and erythrocyte cell lysates.

Paulsson, J.M. *et al.* (2008) *In vivo* transmigrated monocytes from patients with stable coronary artery disease have a reduced expression of CD11b. *Clin. Exp. Immunol.* **153**:196.

Sample(s) Tested: human serum.

Bozkurt, F.Y. *et al.* (2006) Anti-inflammatory cytokines in gingival crevicular fluid in patients with periodontitis and rheumatoid arthritis: a preliminary report. *Cytokine* **35**:180.

Sample(s) Tested: human gingival crevicular fluid.

QuantiGlo Chemiluminescent Human IL-10 ELISACatalog # **Q1000**

Sensitivity: 3.03 pg/mL

Range: 3.2-10,000 pg/mL

Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Van Halteren, A.G. *et al.* (2002) Redirection of human autoreactive T cells upon interaction with dendritic cells modulated by TX527, an analog of 1,25 dihydroxyvitamin D(3). *Diabetes* **51**:2119.

Sample(s) Tested: human dendritic cell culture supernate.

Quantikine Mouse IL-10 ELISACatalog # **M1000***

Sensitivity: 4 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum.

Luo, Q. *et al.* (2009) Vasoactive intestinal peptide attenuates concanavalin A-mediated liver injury. *Eur. J. Pharmacol.* **607**:226.

Sample(s) Tested: mouse plasma, homogenized mouse liver tissue.

Li, H. *et al.* (2009) Intravenous tolerance modulates macrophage classical activation and antigen presentation in experimental autoimmune encephalomyelitis. *J. Neuroimmunol.* **208**:54.

Sample(s) Tested: mouse monocyte/T cell co-culture supernate.

Vultaggio, A. *et al.* (2009) Modified adenine (9-benzyl-2-butoxy-8-hydroxyadenine) redirects Th2-mediated murine lung inflammation by triggering TLR7. *J. Immunol.* **182**:880.

Sample(s) Tested: mouse serum.

Teixeira, F.M. *et al.* (2008) *Staphylococcus aureus* infection after splenectomy and splenic autotransplantation in BALB/c mice. *Clin. Exp. Immunol.* **154**:255.

Sample(s) Tested: mouse splenocyte cell culture supernate, mouse plasma, homogenized mouse liver and lung tissue.

Cho, Y.S. *et al.* (2008) Tyrosine phosphatase SHP-1 in oxidative stress and development of allergic airway inflammation. *Am. J. Respir. Cell Mol. Biol.* **39**:412.

Sample(s) Tested: mouse BALF.

Quantikine Porcine IL-10 ELISACatalog # **P1000**

Sensitivity: 5.5 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Wall, R. *et al.* (2009) Metabolic activity of the enteric microbiota influences the fatty acid composition of murine and porcine liver and adipose tissues. *Am. J. Clin. Nutr.* **89**:1393.

Sample(s) Tested: porcine lamina propria lymphocyte cell culture supernate.

Thorgersen, E.B. *et al.* (2009) Inhibition of complement and CD14 attenuates the *Escherichia coli*-induced inflammatory response in porcine whole blood. *Infect. Immun.* **77**:725.

Sample(s) Tested: porcine plasma from LPS-stimulated whole blood.

Saethre, M. *et al.* (2008) Cytokine secretion depends on Gal α (1,3)Gal expression in a pig-to-human whole blood model. *J. Immunol.* **180**:6346.

Sample(s) Tested: human whole blood/porcine aortic endothelial cell co-culture supernate.

Luna, C.M. *et al.* (2007) Experimental severe *Pseudomonas aeruginosa* pneumonia and antibiotic therapy in piglets receiving mechanical ventilation. *Chest* **132**:523.

Sample(s) Tested: porcine serum, porcine BALF.

Weber, T.E. & B.J. Kerr (2006) Butyrate differentially regulates cytokines and proliferation in porcine peripheral blood mononuclear cells. *Vet. Immunol. Immunopathol.* **113**:139.

Sample(s) Tested: porcine peripheral blood mononuclear cell culture supernate.

Quantikine Rat IL-10 ELISACatalog # **R1000***

Sensitivity: 10 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Peck, G. *et al.* (2009) Serum-induced macrophage activation is related to the severity of septic shock. *Inflamm. Res.* **58**:89.

Sample(s) Tested: rat peritoneal macrophage cell culture supernate.

Zhao, M. *et al.* (2008) Psychological stress induces hypoferremia through the IL-6-hepcidin axis in rats. *Biochem. Biophys. Res. Commun.* **373**:90.

Sample(s) Tested: rat serum, homogenized rat liver tissue.

Ke, Y. *et al.* (2008) Ocular regulatory T cells distinguish monophasic from recurrent autoimmune uveitis. *Invest. Ophthalmol. Vis. Sci.* **49**:3999.

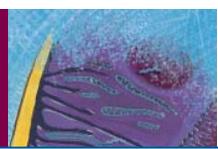
Sample(s) Tested: rat aqueous humor.

Hu, A.P. *et al.* (2008) Oridonin promotes CD4⁺/CD25⁺ Treg differentiation, modulates Th1/Th2 balance and induces HO-1 in rat splenic lymphocytes. *Inflamm. Res.* **57**:163.

Sample(s) Tested: rat Th2 cell culture supernate.

de Oliveira, A.P. *et al.* (2007) Cellular recruitment and cytokine generation in a rat model of allergic lung inflammation are differentially modulated by progesterone and estradiol. *Am. J. Physiol. Cell Physiol.* **293**:C1120.

Sample(s) Tested: rat BALF, rat femur lavage.



IL-11

Quantikine Human IL-11 ELISA

Catalog # **D1100**

Sensitivity: 8 pg/mL

Range: 15.6-1000 pg/mL (cell culture supernate), 31.2-2000 pg/mL (serum/plasma)

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Bronte-Tinkew, D.M. *et al.* (2009) *Helicobacter pylori* cytotoxin-associated gene A activates the signal transducer and activator of transcription 3 pathway *in vitro* and *in vivo*. *Cancer Res.* **69**:632.

Sample(s) Tested: HEP-2 human larynx squamous carcinoma cell culture supernate.

Siddappa, R. *et al.* (2008) cAMP/PKA pathway activation in human mesenchymal stem cells *in vitro* results in robust bone formation *in vivo*. *Proc. Natl. Acad. Sci. U.S.A.* **105**:7281.

Sample(s) Tested: human mesenchymal stem cell culture supernate.

Liem-Moolenaar, M. *et al.* (2008) Pharmacodynamics and pharmacokinetics of the novel thrombopoietin mimetic peptide RWJ-800088 in humans. *Clin. Pharmacol. Ther.* **84**:481.

Sample(s) Tested: human plasma.

Cardier, J.E. *et al.* (2006) Relationship of thrombopoietin and interleukin-11 levels to thrombocytopenia associated with dengue disease. *Cytokine* **34**:155.

Sample(s) Tested: human serum.

Chung, H.L. *et al.* (2005) Relationship between atopic status and nasal interleukin 10 and 11 levels in infants with respiratory syncytial virus bronchiolitis. *Ann. Allergy Asthma Immunol.* **94**:267.

Sample(s) Tested: human nasal secretions.

IL-12

Quantikine Human IL-12 ELISA

Catalog # **D1200***

Sensitivity: 5 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.

Hsieh, C.C. *et al.* (2009) Cerebrospinal fluid levels of interleukin-6 and interleukin-12 in children with meningitis. *Childs Nerv. Syst.* **25**:461.

Sample(s) Tested: human serum, human CSF.

Chase, J.C. *et al.* (2009) Direct and indirect impairment of human dendritic cell function by virulent *Francisella tularensis* Schu 54. *Infect. Immun.* **77**:180.

Sample(s) Tested: human dendritic cell culture supernate.

Liu, T.Y. *et al.* (2008) Distinct subsets of human invariant NKT cells differentially regulate T helper responses via dendritic cells. *Eur. J. Immunol.* **38**:1012.

Sample(s) Tested: human dendritic cell and iNKT cell culture supernates.

Little, R.F. *et al.* (2007) Phase 2 study of pegylated liposomal doxorubicin in combination with interleukin-12 for AIDS-related Kaposi sarcoma. *Blood* **110**:4165.

Sample(s) Tested: human serum.

Makis, A.C. *et al.* (2006) C-reactive protein and vascular cell adhesion molecule-1 as markers of severity in sickle cell disease. *Arch. Intern. Med.* **166**:366.

Sample(s) Tested: human plasma (heparin).

Quantikine HS Human IL-12 ELISA

Catalog # **HS120***

Sensitivity: 0.5 pg/mL

Range: 0.625-40 pg/mL (cell culture supernate), 0.781-50 pg/mL (serum, plasma)

Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Daud, A.I. *et al.* (2008) Phase I trial of interleukin-12 plasmid electroporation in patients with metastatic melanoma. *J. Clin. Oncol.* **26**:5896.

Sample(s) Tested: homogenized human melanoma tissue, human fine needle aspirate of melanoma tissue.

Dauer, M. *et al.* (2008) Combined use of toll-like receptor agonists and prostaglandin E(2) in the FastDC model: rapid generation of human monocyte-derived dendritic cells capable of migration and IL-12p70 production. *J. Immunol. Methods* **337**:97.

Sample(s) Tested: human dendritic cell culture supernate.

Norris, P.J. *et al.* (2006) Elevations in IL-10, TNF- α , and IFN- γ from the earliest point of HIV Type 1 infection. *AIDS Res. Hum. Retroviruses* **22**:757.

Sample(s) Tested: human plasma.

Rutella, S. *et al.* (2006) Hepatocyte growth factor favors monocyte differentiation into regulatory interleukin (IL)-10⁺⁺IL-12^{low/neg} accessory cells with dendritic-cell features. *Blood* **108**:218.

Sample(s) Tested: human monocyte and CD4⁺T cell culture supernates.

Chaggier, A. *et al.* (2006) Human complete Stat-1 deficiency is associated with defective type I and II IFN responses *in vitro* but immunity to some low virulence viruses *in vivo*. *J. Immunol.* **176**:5078.

Sample(s) Tested: human plasma (heparin).

Quantikine Mouse IL-12 p70 ELISA

Catalog # **M1270***

Sensitivity: 2.5 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum.

Caruso, R. *et al.* (2009) Inhibition of monocyte-derived inflammatory cytokines by IL-25 occurs via p38 Map kinase-dependent induction of Socs-3. *Blood* **113**:3512.

Sample(s) Tested: mouse serum.

Aurischio, L. *et al.* (2009) Treatment of mammary carcinomas in HER-2 transgenic mice through combination of genetic vaccine and an agonist of Toll-like receptor 9. *Clin. Cancer Res.* **15**:1575.

Sample(s) Tested: mouse serum.

Li, H. *et al.* (2009) Intravenous tolerance modulates macrophage classical activation and antigen presentation in experimental autoimmune encephalomyelitis. *J. Neuroimmunol.* **208**:54.

Sample(s) Tested: mouse monocyte/T cell co-culture supernate.

Li, Q. *et al.* (2008) Pulmonary stromal cells induce the generation of regulatory DC attenuating T cell-mediated lung inflammation. *Eur. J. Immunol.* **38**:2751.

Sample(s) Tested: mouse BALF, mouse mixed lymphocyte reaction cell culture supernate.

Su, X. *et al.* (2008) CD47 deficiency protects mice from lipopolysaccharide-induced acute lung injury and *Escherichia coli* pneumonia. *J. Immunol.* **180**:6947.

Sample(s) Tested: mouse BALF, mouse plasma (EDTA).

IL-12/IL-23 p40**Quantikine Human IL-12/IL-23 p40 ELISA**Catalog # **DP400***

Sensitivity: 15 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Chase, J.C. *et al.* (2009) Direct and indirect impairment of human dendritic cell function by virulent *Francisella tularensis* Schu 54. *Infect. Immun.* **77**:180.*Sample(s) Tested*: human dendritic cell culture supernate.Alvarado-Navarro, A. *et al.* (2008) The 3'UTR 1188 A/C polymorphism in the interleukin-12p40 gene (IL-12B) is associated with lepromatous leprosy in the west of Mexico. *Immunol. Lett.* **118**:148.*Sample(s) Tested*: human serum.Liu, T.Y. *et al.* (2008) Distinct subsets of human invariant NKT cells differentially regulate T helper responses via dendritic cells. *Eur. J. Immunol.* **38**:1012.*Sample(s) Tested*: human dendritic cell and iNKT cell culture supernates.Dudek, A.Z. *et al.* (2007) First in human phase I trial of 852A, a novel systemic toll-like receptor 7 agonist, to activate innate immune responses in patients with advanced cancer. *Clin. Cancer Res.* **13**:7119.*Sample(s) Tested*: human serum.Pockros, P.J. *et al.* (2007) Oral resiquimod in chronic HCV infection: safety and efficacy in 2 placebo-controlled, double-blind phase IIa studies. *J. Hepatol.* **47**:174.*Sample(s) Tested*: human serum.**Quantikine Mouse IL-12/IL-23 p40 (Allele-specific) ELISA**Catalog # **M1240***

Sensitivity: 4 pg/mL

Range: 11.7-750 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum.

Vultaggio, A. *et al.* (2009) Modified adenine (9-benzyl-2-butoxy-8-hydroxyadenine) redirects Th2-mediated murine lung inflammation by triggering TLR7. *J. Immunol.* **182**:880.*Sample(s) Tested*: mouse serum.Olleros, M.L. *et al.* (2008) Fat diet and alcohol-induced steatohepatitis after LPS challenge in mice: role of bioactive TNF and Th1 type cytokines. *Cytokine* **44**:118.*Sample(s) Tested*: mouse serum.Da Silva, C.A. *et al.* (2008) TLR-2 and IL-17A in chitin-induced macrophage activation and acute inflammation. *J. Immunol.* **181**:4279.*Sample(s) Tested*: mouse BALF, mouse BAL-derived macrophage cell culture supernate.Littlejohn, J.E. *et al.* (2008) Bcl-xL antisense oligonucleotide and cisplatin combination therapy extends survival in SCID mice with established mesothelioma xenografts. *Int. J. Cancer* **123**:202.*Sample(s) Tested*: mouse serum.Voskas, D. *et al.* (2008) An eosinophil immune response characterizes the inflammatory skin disease observed in Tie-2 transgenic mice. *J. Leukoc. Biol.* **84**:59.*Sample(s) Tested*: mouse serum.**Quantikine Mouse IL-12/IL-23 p40 (Non-Allele-specific) ELISA**Catalog # **MP400***

Sensitivity: 2.7 pg/mL

Range: 11.7-750 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Liu, Q. *et al.* (2009) p47phox deficiency induces macrophage dysfunction resulting in progressive crystalline macrophage pneumonia. *Am. J. Pathol.* **174**:153.*Sample(s) Tested*: mouse BALF, mouse T cell and peritoneal macrophage cell culture supernates.Divangahi, M. *et al.* (2008) NOD2-deficient mice have impaired resistance to *Mycobacterium tuberculosis* infection through defective innate and adaptive immunity. *J. Immunol.* **181**:7157.*Sample(s) Tested*: mouse macrophage cell culture supernate.Li, Q. *et al.* (2008) Pulmonary stromal cells induce the generation of regulatory DC attenuating T cell-mediated lung inflammation. *Eur. J. Immunol.* **38**:2751.*Sample(s) Tested*: mouse BALF, mouse mixed lymphocyte reaction cell culture supernate.Kang, M.J. *et al.* (2008) Cigarette smoke selectively enhances viral PAMP- and virus-induced pulmonary innate immune and remodeling responses in mice. *J. Clin. Invest.* **118**:2771.*Sample(s) Tested*: mouse BALF.Santel, A. *et al.* (2006) A novel siRNA-lipoplex technology for RNA interference in the mouse vascular endothelium. *Gene Ther.* **13**:1222.*Sample(s) Tested*: mouse serum.**Quantikine Porcine IL-12/IL-23 p40 ELISA**Catalog # **P1240**

Sensitivity: 18.2 pg/mL

Range: 46.9-3000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Wall, R. *et al.* (2009) Metabolic activity of the enteric microbiota influences the fatty acid composition of murine and porcine liver and adipose tissues. *Am. J. Clin. Nutr.* **89**:1393.*Sample(s) Tested*: porcine lamina propria lymphocytes cell culture supernate.Saethre, M. *et al.* (2008) Cytokine secretion depends on Gal α (1,3)Gal expression in a pig-to-human whole blood model. *J. Immunol.* **180**:6346.*Sample(s) Tested*: human whole blood/porcine aortic endothelial cell co-culture supernate.**IL-13****Quantikine Human IL-13 ELISA**Catalog # **D1300***

Sensitivity: 32 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Eyerich, K. *et al.* (2009) IL-17 in atopic eczema: linking allergen-specific adaptive and microbial-triggered innate immune response. *J. Allergy Clin. Immunol.* **123**:59.*Sample(s) Tested*: human T cell culture supernate.Schain, F. *et al.* (2008) Evidence for a pathophysiological role of cysteinyl leukotrienes in classical Hodgkin lymphoma. *Int. J. Cancer* **123**:2285.*Sample(s) Tested*: human Hodgkin's lymphoma cell culture supernate.



Printza, N. *et al.* (2008) IL-18 is correlated with type-2 immune response in children with steroid sensitive nephrotic syndrome. *Cytokine* **44**:262.

Sample(s) Tested: human serum.

Ingvarsson, J. *et al.* (2008) Detection of pancreatic cancer using antibody microarray-based serum protein profiling. *Proteomics* **8**:2211.

Sample(s) Tested: human serum.

Johnson, R.B. & F.G. Serio (2007) The contribution of interleukin-13 and -15 to the cytokine network within normal and diseased gingiva. *J. Periodontol.* **78**:691.

Sample(s) Tested: homogenized human gingival papilla tissue.

Quantikine Mouse IL-13 ELISA

Catalog # **M1300CB***

Sensitivity: 1.5 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate.

Shinagawa, K. *et al.* (2009) A severe deficiency of coagulation factor VIIa results in attenuation of the asthmatic response in mice. *Am. J. Physiol. Lung Cell Mol. Physiol.* **296**:L763.

Sample(s) Tested: mouse BALF.

Ryman-Rasmussen, J.P. *et al.* (2009) Inhaled multiwalled carbon nanotubes potentiate airway fibrosis in murine allergic asthma. *Am. J. Respir. Cell Mol. Biol.* **40**:349.

Sample(s) Tested: mouse BALF.

Claudio, E. *et al.* (2009) The adaptor protein CIKS/Act1 is essential for IL-25-mediated allergic airway inflammation. *J. Immunol.* **182**:1617.

Sample(s) Tested: mouse embryonic fibroblast cell culture supernate.

Perruche, S. (2006) Association of mixed hematopoietic chimerism with elevated circulating autoantibodies and chronic graft-versus-host disease occurrence. *Transplantation* **81**:573.

Sample(s) Tested: mouse serum.

Harada, D. (2006) Effect of orally administered rolipram, a phosphodiesterase 4 inhibitor, on a mouse model of the dermatitis caused by 2,4,6-trinitro-1-chlorobenzene (TNCB)-repeated application. *Eur. J. Pharmacol.* **532**:128.

Sample(s) Tested: homogenized mouse ear tissue.

IL-15

Quantikine Human IL-15 ELISA

Catalog # **D1500***

Sensitivity: 2 pg/mL

Range: 3.9-250 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Louis, C.U. *et al.* (2009) Enhancing the *in vivo* expansion of adoptively transferred EBV-specific CTL with lymphodepleting CD45 monoclonal antibodies in NPC patients. *Blood* **113**:2442.

Sample(s) Tested: human plasma.

Shi, J. *et al.* (2008) Infusion of haplo-identical killer immunoglobulin-like receptor ligand mismatched NK cells for relapsed myeloma in the setting of autologous stem cell transplantation. *Br. J. Haematol.* **143**:641.

Sample(s) Tested: human serum.

Curnow, S.J. *et al.* (2008) Serum cytokine profiles in Behçet's disease: is there a role for IL-15 in pathogenesis? *Immunol. Lett.* **121**:7.

Sample(s) Tested: human serum.

Motegi, A. *et al.* (2008) IL-15-induced CD8⁺CD122⁺ T cells increase antibacterial and anti-tumor immune responses: implications for immune function in aged mice. *J. Leukoc. Biol.* **84**:1047.

Sample(s) Tested: homogenized human liver and spleen tissue.

Hamzaoui, K. *et al.* (2006) Levels of IL-15 in serum and cerebrospinal fluid of patients with Behçet's Disease. *Scand. J. Immunol.* **62**:1.

Sample(s) Tested: human serum, human CSF.

QuantiGlo Human IL-15 ELISA

Catalog # **Q1500B**

Sensitivity: 0.431 pg/mL

Range: 1.03-750 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Rosati, M. *et al.* (2008) Increased immune responses in rhesus macaques by DNA vaccination combined with electroporation. *Vaccine* **26**:5223.

Sample(s) Tested: rhesus macaque plasma.

Santegoets, S.J. *et al.* (2008) Inducing antitumor T cell immunity: comparative functional analysis of interstitial versus Langerhans dendritic cells in a human cell line model. *J. Immunol.* **180**:4540.

Sample(s) Tested: MUTZ-3 human CD34⁺ acute myeloid leukemia cell line and human dendritic cell culture supernate.

IL-16

Quantikine Human IL-16 ELISA

Catalog # **D1600**

Sensitivity: 13.4 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Tsai, I.S. *et al.* (2005) Interleukin-12 and interleukin-16 in periodontal disease. *Cytokine* **31**:34.

Sample(s) Tested: human gingival crevicular fluid.

Qin, X.J. *et al.* (2005) Interleukin-16 in tuberculous and malignant pleural effusions. *Eur. Respir. J.* **25**:605.

Sample(s) Tested: human serum, human pleural effusion.

Barak, V. *et al.* (2004) Interleukin-18 levels correlate with severe ovarian hyperstimulation syndrome. *Fertil. Steril.* **82**:415.

Sample(s) Tested: human plasma, human peritoneal fluid, human pleural effusion.

Alexandrakis, M.G. *et al.* (2004) Serum level of interleukin-16 in multiple myeloma patients and its relationship to disease activity. *Am. J. Hematol.* **75**:101.

Sample(s) Tested: human serum.

Burton, C.T. *et al.* (2002) Impact of NNRTI compared to PI-based highly active antiretroviral therapy on CCR5 receptor expression, β-chemokines and IL-16 secretion in HIV-1 infection. *Clin. Exp. Immunol.* **130**:286.

Sample(s) Tested: human plasma (EDTA and heparin).

IL-17/IL-17 A**Quantikine Human IL-17 ELISA**Catalog # **D1700***

Sensitivity: 15 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Shahrara, S. *et al.* (2009) IL-17 induces monocyte migration in rheumatoid arthritis. *J. Immunol.* **182**:3884.*Sample(s) Tested:* human synovial fluid.Eyerich, K. *et al.* (2009) IL-17 in atopic eczema: linking allergen-specific adaptive and microbial-triggered innate immune response. *J. Allergy Clin. Immunol.* **123**:59.*Sample(s) Tested:* human T cell culture supernate.Zhang, N. *et al.* (2008) Different types of T-effector cells orchestrate mucosal inflammation in chronic sinus disease. *J. Allergy Clin. Immunol.* **122**:961.*Sample(s) Tested:* homogenized human nasal polyp tissue.Ciprandi, G. *et al.* (2008) Serum IL-17 levels in patients with allergic rhinitis. *J. Allergy Clin. Immunol.* **122**:650.*Sample(s) Tested:* human serum.Oteri, G. *et al.* (2008) Reduced serum levels of Interleukin 17 in patients with osteonecrosis of the jaw and in multiple myeloma subjects after bisphosphonates administration. *Cytokine* **43**:103.*Sample(s) Tested:* human serum.**Quantikine Mouse IL-17 ELISA**Catalog # **M1700***

Sensitivity: 5 pg/mL

Range: 10.9-700 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Caruso, R. *et al.* (2009) Inhibition of monocyte-derived inflammatory cytokines by IL-25 occurs via p38 Map kinase-dependent induction of Socs-3. *Blood* **113**:3512.*Sample(s) Tested:* mouse serum.Ito, R. *et al.* (2008) Involvement of IL-17A in the pathogenesis of DSS-induced colitis in mice. *Biochem. Biophys. Res. Commun.* **377**:12.*Sample(s) Tested:* homogenized mouse colon tissue.Shigeta, A. *et al.* (2008) An L-selectin ligand distinct from P-selectin glycoprotein ligand-1 is expressed on endothelial cells and promotes neutrophil rolling in inflammation. *Blood* **112**:4915.*Sample(s) Tested:* mouse serum.Da Silva, C.A. *et al.* (2008) TLR-2 and IL-17A in chitin-induced macrophage activation and acute inflammation. *J. Immunol.* **181**:4279.*Sample(s) Tested:* mouse BALF, mouse BAL-derived macrophage cell culture supernate.Cihakova, D. *et al.* (2008) Interleukin-13 protects against experimental autoimmune myocarditis by regulating macrophage differentiation. *Am. J. Pathol.* **172**:1195.*Sample(s) Tested:* homogenized mouse heart tissue, mouse spleen cell culture supernate.**IL-17A/F Heterodimer****Quantikine Mouse IL-17A/F Heterodimer ELISA**Catalog # **M17AF0**

Sensitivity: 2.8 pg/mL

Range: 7.81-500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

IL-18/IL-1F4**Human IL-18/IL-1F4 ELISA**Catalog # **7620**

Sensitivity: 12.5 pg/mL

Range: 25.6-1000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): plasma (EDTA), serum.

Samnégård, A. *et al.* (2009) Gender specific associations between matrix metalloproteinases and inflammatory markers in post myocardial infarction patients. *Atherosclerosis* **202**:550.*Sample(s) Tested:* human plasma.Everett, B.M. *et al.* (2009) Interleukin-18 and the risk of future cardiovascular disease among initially healthy women. *Atherosclerosis* **202**:282.*Sample(s) Tested:* human plasma.Printza, N. *et al.* (2008) IL-18 is correlated with type-2 immune response in children with steroid sensitive nephrotic syndrome. *Cytokine* **44**:262.*Sample(s) Tested:* human serum.Empana, J.P. *et al.* (2008) Contribution of novel biomarkers to incident stable angina and acute coronary syndrome: the PRIME Study. *Eur. Heart J.* **29**:1966.*Sample(s) Tested:* human plasma.Reddy, V.S. *et al.* (2008) Interleukin-18 stimulates fibronectin expression in primary human cardiac fibroblasts via PI3K-Akt-dependent NF- κ B activation. *J. Cell. Physiol.* **215**:697.*Sample(s) Tested:* human cardiac fibroblast cell culture supernate.**Mouse IL-18/IL-1F4 ELISA**Catalog # **7625**

Sensitivity: 25 pg/mL

Range: 25.6-1000 pg/mL

Sample Volume: 150 µL

Validated Sample Type(s): serum.

Venkatachalam, K. *et al.* (2009) Neutralization of interleukin-18 ameliorates ischemia/reperfusion-induced myocardial injury. *J. Biol. Chem.* **284**:7853.*Sample(s) Tested:* homogenized mouse myocardium tissue.Kang, M.J. *et al.* (2008) Cigarette smoke selectively enhances viral PAMP- and virus-induced pulmonary innate immune and remodeling responses in mice. *J. Clin. Invest.* **118**:2771.*Sample(s) Tested:* mouse BALF.Oku, H. *et al.* (2008) Antifibrotic action of pirfenidone and prednisolone: different effects on pulmonary cytokines and growth factors in bleomycin-induced murine pulmonary fibrosis. *Eur. J. Pharmacol.* **590**:400.*Sample(s) Tested:* homogenized mouse lung tissue.Rosenzweig, H.L. *et al.* (2008) Activation of NOD2 *in vivo* induces IL-1 β production in the eye via caspase-1 but results in ocular inflammation independently of IL-1 signaling. *J. Leukoc. Biol.* **84**:529.*Sample(s) Tested:* homogenized mouse eye tissue.



Cihakova, D. *et al.* (2008) Interleukin-13 protects against experimental autoimmune myocarditis by regulating macrophage differentiation. *Am. J. Pathol.* **172**:1195.

Sample(s) Tested: homogenized mouse heart tissue, mouse splenocyte cell culture supernate.

IL-19

Quantikine Human IL-19 ELISA

Catalog # **D1900**

Sensitivity: 12.2 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), saliva, serum, and urine.

Connolly-Andersen, A.M. (2009) Crimean Congo hemorrhagic fever virus infects human monocyte-derived dendritic cells. *Virology* **390**:157.

Sample(s) Tested: human monocyte-derived dendritic cell culture supernate.

IL-20

Quantikine Human IL-20 ELISA

Catalog # **DL200**

Sensitivity: 16.6 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Quantikine Mouse IL-20 ELISA

Catalog # **ML200**

Sensitivity: 6.4 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

IL-22

Quantikine Human IL-22 ELISA

Catalog # **D2200**

Sensitivity: 5.8 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

Eyerich, K. *et al.* (2009) IL-17 in atopic eczema: linking allergen-specific adaptive and microbial-triggered innate immune response. *J. Allergy Clin. Immunol.* **123**:59.

Sample(s) Tested: human T cell culture supernate.

Bard, J.D. *et al.* (2008) Aberrant expression of IL-22 receptor 1 and autocrine IL-22 stimulation contribute to tumorigenicity in ALK⁺ anaplastic large cell lymphoma. *Leukemia* **22**:1595.

Sample(s) Tested: human anaplastic large-cell lymphoma cell culture supernate.

Aujla, S.J. *et al.* (2008) IL-22 mediates mucosal host defense against Gram-negative bacterial pneumonia. *Nat. Med.* **14**:275.

Sample(s) Tested: human BALF, human T cell culture supernate.

Dambacher, J. *et al.* (2008) The role of interleukin-22 in hepatitis C virus infection. *Cytokine* **41**:209.

Sample(s) Tested: human serum.

Wilson, N.J. *et al.* (2007) Development, cytokine profile and function of human interleukin 17-producing helper T cells. *Nat. Immunol.* **8**:950.

Sample(s) Tested: human activated T cell culture supernate.

Quantikine Mouse/Rat IL-22 ELISA

Catalog # **M2200**

Sensitivity: 8.2 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Siegmund, S. *et al.* (2009) Differential IL-23 requirement for IL-22 and IL-17A production during innate immunity against *Salmonella enterica* serovar Enteritidis. *Int. Immunol.* **21**:555.

Sample(s) Tested: mouse serum, mouse peritoneal lavage fluid, mouse peritoneal exudate cell culture supernate.

Wahl, C. *et al.* (2009) IL-22-dependent attenuation of T cell-dependent (ConA) hepatitis in herpes virus entry mediator deficiency. *J. Immunol.* **182**:4521.

Sample(s) Tested: mouse serum, mouse liver cell culture supernate.

McKinley, L. *et al.* (2008) TH17 cells mediate steroid-resistant airway inflammation and airway hyperresponsiveness in mice. *J. Immunol.* **181**:4089.

Sample(s) Tested: mouse BALF, homogenized mouse lung tissue.

Aujla, S.J. *et al.* (2008) IL-22 mediates mucosal host defense against Gram-negative bacterial pneumonia. *Nat. Med.* **14**:275.

Sample(s) Tested: homogenized mouse lung tissue.

McGeachy, M.J. *et al.* (2007) TGF-β and IL-6 drive the production of IL-17 and IL-10 by T cells and restrain T(H)-17 cell-mediated pathology. *Nat. Immunol.* **8**:1390.

Sample(s) Tested: mouse T cell culture supernate.

IL-23

Quantikine Human IL-23 ELISA

Catalog # **D2300B**

Sensitivity: 16.3 pg/mL

Range: 39-2500 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Eid, R.E. *et al.* (2009) Interleukin-17 and interferon-γ are produced concomitantly by human coronary artery-infiltrating T cells and act synergistically on vascular smooth muscle cells. *Circulation* **119**:1424.

Sample(s) Tested: human plasma.

Chi, W. *et al.* (2008) Upregulated IL-23 and IL-17 in Behçet patients with active uveitis. *Invest. Ophthalmol. Vis. Sci.* **49**:3058.

Sample(s) Tested: human serum, human peripheral blood mononuclear cell culture supernate.

Quantikine Mouse IL-23 ELISA

Catalog # **M2300**

Sensitivity: 4.17 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.

Meiron, M. *et al.* (2008) CXCL12 (SDF-1α) suppresses ongoing experimental autoimmune encephalomyelitis by selecting antigen-specific regulatory T cells. *J. Exp. Med.* **205**:2643.

Sample(s) Tested: mouse splenocyte cell culture supernate.

IL-27 p28

Quantikine Mouse IL-27 p28 ELISA

Catalog # **M2728**

Sensitivity: 4.7 pg/mL

Range: 7.8–500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Vultaggio, A. *et al.* (2009) Modified adenine (9-benzyl-2-butoxy-8-hydroxyadenine) redirects Th2-mediated murine lung inflammation by triggering TLR7. *J. Immunol.* **182**:880.

Sample(s) Tested: mouse serum.

Sample(s) Tested: mouse serum.

Shinohara, M.L. *et al.* (2008) Engagement of the type I interferon receptor on dendritic cells inhibits T helper 17 cell development: role of intracellular osteopontin. *Immunity* **29**:68.

Sample(s) Tested: mouse T cell culture supernate.

Xu, J. *et al.* (2007) Peroxisome proliferator-activated receptor- α agonist fenofibrate regulates IL-12 family cytokine expression in the CNS: relevance to multiple sclerosis. *J. Neurochem.* **103**:1801.

Sample(s) Tested: mouse astrocyte cell culture supernate.

Fitzgerald, D.C. *et al.* (2007) Suppressive effect of IL-27 on encephalitogenic Th17 cells and the effector phase of experimental autoimmune encephalomyelitis. *J. Immunol.* **179**:3268.

Sample(s) Tested: mouse astrocyte and splenocyte cell culture supernates.

Molle, C. *et al.* (2007) IL-27 synthesis induced by TLR ligation critically depends on IFN regulatory factor 3. *J. Immunol.* **178**:7607.

Sample(s) Tested: mouse serum, mouse bone marrow-derived dendritic cell culture supernate.

IL-33

Quantikine Mouse IL-33 ELISA

Catalog # **M3300**

Sensitivity: 14.3 pg/mL

Range: 31.3–2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Shimosato, T. *et al.* (2010) CpG oligodeoxynucleotides induce strong up-regulation of interleukin-33 via Toll-like receptor 9. *Biochem. Biophys. Res. Commun.* **394**:81.

Sample(s) Tested: mouse splenocyte cell culture supernate.

JNK

Cell-Based ELISA Human/Mouse/Rat Phospho-JNK (T183/Y185)

Catalog # **KCB1205**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.

Kallikrein 3/PSA

Quantikine Human Kallikrein 3/PSA ELISA

Catalog # **DKK300**

Sensitivity: 0.069 ng/mL

Range: 0.94–60 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Deep, G. *et al.* (2008) Isosilybin B causes androgen receptor degradation in human prostate carcinoma cells via PI3K-Akt-Mdm2-mediated pathway. *Oncogene* **27**:3986.

Sample(s) Tested: LNCaP, 22Rv1, and LAPC4 human prostate cancer cell culture supernates.

KGF/FGF-7

Quantikine Human KGF/FGF-7 ELISA

Catalog # **DKG00**

Sensitivity: 15 pg/mL

Range: 31.2–2000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Nafidi, O. *et al.* (2009) Mechanisms of renal phosphate loss in liver resection-associated hypophosphatemia. *Ann. Surg.* **249**:824.

Sample(s) Tested: human serum.

Chandel, N.S. *et al.* (2009) Keratinocyte growth factor expression is suppressed in early acute lung injury/acute respiratory distress syndrome by Smad and c-Abl pathways. *Crit. Care Med.* **37**:1678.

Sample(s) Tested: human BALF, normal human lung fibroblast cell culture supernate.

Kellouche, S. *et al.* (2007) Tissue engineering for full-thickness burns: a dermal substitute from bench to bedside. *Biochem. Biophys. Res. Commun.* **363**:472.

Sample(s) Tested: human foreskin and dermal fibroblast cell culture supernates.

Yashiro, M. *et al.* (2007) Selective cyclooxygenase-2 inhibitor downregulates the paracrine epithelial-mesenchymal interactions of growth in scirrhous gastric carcinoma. *Int. J. Cancer* **120**:686.

Sample(s) Tested: NF-21 human gastric fibroblast cell and OCUM-2M human gastric cancer cell culture supernates.

Gröschl, M. *et al.* (2005) Salivary leptin induces increased expression of growth factors in oral keratinocytes. *J. Mol. Endocrinol.* **34**:353.

Sample(s) Tested: human keratinocyte cell culture supernate.

Leptin/OB

Quantikine Human Leptin ELISA

Catalog # **DLP00***

Sensitivity: 7.8 pg/mL

Range: 15.6–1000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

AlZadjali, M.A. *et al.* (2009) Insulin resistance is highly prevalent and is associated with reduced exercise tolerance in nondiabetic patients with heart failure. *J. Am. Coll. Cardiol.* **53**:747.

Sample(s) Tested: human serum.



Dellas, C. *et al.* (2008) Absence of leptin resistance in platelets from morbidly obese individuals may contribute to the increased thrombosis risk in obesity. *Thromb. Haemost.* **100**:1123.

Sample(s) Tested: human plasma.

Radon, K. *et al.* (2008) Serum leptin and adiponectin levels and their association with allergic sensitization. *Allergy* **63**:1448.

Sample(s) Tested: human serum.

Guebre-Egziabher, F. *et al.* (2008) Nutritional intervention to reduce the n-6/n-3 fatty acid ratio increases adiponectin concentration and fatty acid oxidation in healthy subjects. *Cell Stem Cell* **62**:1287.

Sample(s) Tested: human serum.

Biolo, G. *et al.* (2008) Positive energy balance is associated with accelerated muscle atrophy and increased erythrocyte glutathione turnover during 5 wk of bed rest. *Am. J. Clin. Nutr.* **88**:950.

Sample(s) Tested: human plasma.

Quantikine Mouse Leptin ELISA

Catalog # **MOB00***

Sensitivity: 22 pg/mL

Range: 62.5–4000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Feng, D. *et al.* (2009) Stearoyl-CoA desaturase 1 deficiency protects mice from immune-mediated liver injury. *Lab. Invest.* **89**:222.

Sample(s) Tested: mouse plasma.

Lim, G. *et al.* (2009) Spinal leptin contributes to the pathogenesis of neuropathic pain in rodents. *J. Clin. Invest.* **119**:295.

Sample(s) Tested: rat plasma, rat CSF.

Osei-Hyiaman, D. *et al.* (2008) Hepatic CB1 receptor is required for development of diet-induced steatosis, dyslipidemia, and insulin and leptin resistance in mice. *J. Clin. Invest.* **118**:3160.

Sample(s) Tested: mouse plasma.

Lijnen, H.R. *et al.* (2008) Rofecoxib impairs adipose tissue development in a murine model of nutritionally induced obesity. *Thromb. Haemost.* **100**:338.

Sample(s) Tested: homogenized mouse adipose tissue.

Weigert, J. *et al.* (2008) Small-interference RNA-mediated knock-down of aldehyde oxidase 1 in 3T3-L1 cells impairs adipogenesis and adiponectin release. *FEBS Lett.* **582**:2965.

Sample(s) Tested: 3T3-L1 mouse embryonic fibroblast cell culture supernate.

Leptin R

Quantikine Human Soluble Leptin R ELISA

Catalog # **DOBR00**

Sensitivity: 0.128 ng/mL

Range: 0.312–20 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Dellas, C. *et al.* (2008) Absence of leptin resistance in platelets from morbidly obese individuals may contribute to the increased thrombosis risk in obesity. *Thromb. Haemost.* **100**:1123.

Sample(s) Tested: human plasma.

Sabatier, M.J. *et al.* (2008) Leptin, blood pressure, and aerobic capacity in women. *Am. J. Hypertens.* **21**:1245.

Sample(s) Tested: human serum.

Jiang, L.S. *et al.* (2008) Differential bone metabolism between postmenopausal women with osteoarthritis and osteoporosis. *J. Bone Miner. Res.* **23**:475.

Sample(s) Tested: human serum.

Leukotriene B4/LTB₄

Parameter Multi-species LTB₄ Assay

Catalog # **KGE006B***

Sensitivity: 10.9 pg/mL

Range: 10.3–2500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Sánchez-Galán, E. *et al.* (2009) Leukotriene B4 enhances the activity of nuclear factor-kappaB pathway through BLT1 and BLT2 receptors in atherosclerosis. *Cardiovasc. Res.* **81**:216.

Sample(s) Tested: human plasma (EDTA).

Arias, M.A. *et al.* (2008) CPAP decreases plasma levels of soluble tumour necrosis factor-alpha receptor 1 in obstructive sleep apnoea. *Eur. Respir. J.* **32**:1009.

Sample(s) Tested: human plasma.

Gómez-Hernández, A. *et al.* (2008) Effect of intensive atorvastatin therapy on prostaglandin E2 levels and metalloproteinase-9 activity in the plasma of patients with non-ST-elevation acute coronary syndrome. *Am. J. Cardiol.* **102**:12.

Sample(s) Tested: human plasma.

LIF

Quantikine Human LIF ELISA

Catalog # **DLF00**

Sensitivity: 8 pg/mL

Range: 31.2–2000 pg/mL

Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Bronte-Tinkew, D.M. *et al.* (2009) *Helicobacter pylori* cytotoxin-associated gene A activates the signal transducer and activator of transcription 3 pathway *in vitro* and *in vivo*. *Cancer Res.* **69**:632.

Sample(s) Tested: HEp-2 human larynx squamous carcinoma cell culture supernate.

Xu, J.W. *et al.* (2008) Isoflavones regulate secretion of leukemia inhibitory factor and transforming growth factor β and expression of glycodefin in human endometrial epithelial cells. *J. Endocrinol.* **196**:425.

Sample(s) Tested: human endometrial epithelial cell culture supernate.

Duluc, D. *et al.* (2007) Tumor-associated leukemia inhibitory factor and IL-6 skew monocyte differentiation into tumor-associated macrophage-like cells. *Blood* **110**:4319.

Sample(s) Tested: human monocyte cell culture supernate.

Kamohara, H. *et al.* (2007) Leukemia inhibitory factor functions as a growth factor in pancreas carcinoma cells: Involvement of regulation of LIF and its receptor expression. *Int. J. Oncol.* **30**:977.

Sample(s) Tested: human pancreatic carcinoma cell culture supernate.

Zhang, Y. *et al.* (2006) Interleukin-11 potentiates oligodendrocyte survival and maturation, and myelin formation. *J. Neurosci.* **26**:12174.

Sample(s) Tested: human astrocyte cell culture supernate.

LIF continued**Quantikine Mouse LIF ELISA**Catalog # **MLF00**

Sensitivity: 3.13 pg/mL

Range: 21.9-1400 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Hendriks, J.J. *et al.* (2008) Leukemia inhibitory factor modulates production of inflammatory mediators and myelin phagocytosis by macrophages. *J. Neuroimmunol.* **204**:52.

Sample(s) Tested: RAW264.7 mouse macrophage cell culture supernate.

White, C.A. *et al.* (2007) Blocking LIF action in the uterus by using a PEGylated antagonist prevents implantation: a nonhormonal contraceptive strategy. *Proc. Natl. Acad. Sci. U.S.A.* **104**:19357.

Sample(s) Tested: mouse serum.

Jazayeri, J.A. *et al.* (2007) Generation of mutant leukaemia inhibitory factor (LIF)-IgG heavy chain fusion proteins as bivalent antagonists of LIF. *J. Immunol. Methods* **323**:1.

Sample(s) Tested: mouse serum.

Wang, C.H. *et al.* (2006) Clodronate alleviates cachexia and prolongs survival in nude mice xenografted with an anaplastic thyroid carcinoma cell line. *J. Endocrinol.* **190**:415.

Sample(s) Tested: mouse serum.

Metcalfe, S.M. *et al.* (2005) Leukemia inhibitory factor is linked to regulatory transplantation tolerance. *Transplantation* **79**:726.

Sample(s) Tested: mouse splenocyte cell culture supernate.

LIGHT/TNFSF14**Quantikine Human LIGHT/TNFSF14 ELISA**Catalog # **DLIT00**

Sensitivity: 16.5 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.

Sandberg, W.J. *et al.* (2009) Inflammatory interaction between LIGHT and proteinase-activated receptor-2 in endothelial cells: potential role in atherogenesis. *Circ. Res.* **104**:60.

Sample(s) Tested: human umbilical vein endothelial cell culture supernate.

Liu, G.Z. *et al.* (2008) Enhanced plasma levels of LIGHT in patients with acute atherothrombotic stroke. *Acta Neurol. Scand.* **118**:256.

Sample(s) Tested: human plasma (heparin).

Dhawan, P. *et al.* (2008) The lymphotoxin-β receptor is an upstream activator of NF-κB-mediated transcription in melanoma cells. *J. Biol. Chem.* **283**:15399.

Sample(s) Tested: human melanocyte cell culture supernate.

Celik, S. *et al.* (2007) Platelet-associated LIGHT (TNFSF14) mediates adhesion of platelets to human vascular endothelium. *Thromb. Haemost.* **98**:798.

Sample(s) Tested: human platelet cell culture supernate, plasma (ACD).

Edwards, J.R. *et al.* (2006) LIGHT (TNFSF14), a novel mediator of bone resorption, is elevated in rheumatoid arthritis. *Arthritis Rheum.* **54**:1451.

Sample(s) Tested: human serum.

Lipocalin-2/NGAL**Quantikine Human Lipocalin-2/NGAL ELISA**Catalog # **DLCN20**

Sensitivity: 0.04 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), saliva, serum, urine.

Yang, J. *et al.* (2009) Lipocalin 2 promotes breast cancer progression. *Proc. Natl. Acad. Sci. U.S.A.* **106**:3913.

Sample(s) Tested: human urine.

Tan, B.K. *et al.* (2009) *Ex vivo* and *in vivo* regulation of lipocalin-2, a novel adipokine, by insulin. *Diabetes Care* **32**:129.

Sample(s) Tested: human serum, human omental adipose explant cell culture supernate.

Kanaka-Gantenbein, C. *et al.* (2008) Retinol-binding protein 4 and lipocalin-2 in childhood and adolescent obesity: when children are not just "small adults". *Clin. Chem.* **54**:1176.

Sample(s) Tested: human serum.

Diamanti-Kandarakis, E. *et al.* (2008) Serum concentrations of atherogenic proteins neutrophil gelatinase-associated lipocalin and its complex with matrix metalloproteinase-9 are significantly lower in women with polycystic ovary syndrome: hint of a protective mechanism? *Eur. J. Endocrinol.* **158**:525.

Sample(s) Tested: human serum.

Quantikine Mouse Lipocalin-2/NGAL ELISACatalog # **MLCN20**

Sensitivity: 8.8 pg/mL

Range: 78.1-5000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin), serum, urine.

LOX-1/SR-E1**Quantikine Mouse LOX-1/SR-E1 ELISA**Catalog # **MLX10**

Sensitivity: 5.21 pg/mL

Range: 39.1-2500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Noll, C. *et al.* (2008) Effects of red wine polyphenolic compounds on paraoxonase-1 and lectin-like oxidized low-density lipoprotein receptor-1 in hyperhomocysteinemic mice. *J. Nutr. Biochem.* **20**:586.

Sample(s) Tested: mouse plasma (citrate).

MBL**Quantikine Human MBL ELISA**Catalog # **DMBL00**

Sensitivity: 0.029 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.



M-CSF

Quantikine Human M-CSF ELISA

Catalog # **DMC00***

Sensitivity: 9 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Schuster, C. *et al.* (2009) HLA-DR⁺ leukocytes acquire CD1 antigens in embryonic and fetal human skin and contain functional antigen-presenting cells. *J. Exp. Med.* **206**:169.

Sample(s) Tested: human skin single-cell suspension cell culture supernate.

Dower, K. *et al.* (2008) Innate immune responses to TREM-1 activation: overlap, divergence, and positive and negative cross-talk with bacterial lipopolysaccharide. *J. Immunol.* **180**:3520.

Sample(s) Tested: human monocyte cell culture supernate.

Lekakis, J.P. *et al.* (2006) Genetic variations of the endothelial nitric oxide synthase gene are related to increased levels of C-reactive protein and macrophage-colony stimulating-factor in patients with coronary artery disease. *Thromb. Haemost.* **96**:520.

Sample(s) Tested: human serum.

Hagemann, T. *et al.* (2006) Ovarian cancer cells polarize macrophages toward a tumor-associated phenotype. *J. Immunol.* **176**:5023.

Sample(s) Tested: IGROV-1 human ovarian cancer cell culture supernate.

Schifitto, G. *et al.* (2005) Markers of immune activation and viral load in HIV-associated sensory neuropathy. *Neurology* **64**:842.

Sample(s) Tested: human plasma, human CSF.

Quantikine Mouse M-CSF ELISA

Catalog # **MMC00**

Sensitivity: 5 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Timmons, B.C. *et al.* (2009) Temporal changes in myeloid cells in the cervix during pregnancy and parturition. *J. Immunol.* **182**:2700.

Sample(s) Tested: homogenized mouse cervix tissue.

Ohba, T. *et al.* (2008) A potential role of thymic stromal lymphopoietin in the recruitment of macrophages to mouse intervertebral disc cells via monocyte chemotactic protein 1 induction: implications for herniated discs. *Arthritis Rheum.* **58**:3510.

Sample(s) Tested: mouse intervertebral disc explant cell culture supernate.

Aiello, F.B. *et al.* (2007) IL-7 induces myelopoiesis and erythropoiesis. *J. Immunol.* **178**:1553.

Sample(s) Tested: mouse lymph node cell culture supernate.

Storm, P. *et al.* (2006) Perforin-deficient CD8⁺ T cells mediate fatal lymphocytic choriomeningitis despite impaired cytokine production. *J. Virol.* **80**:1222.

Sample(s) Tested: mouse serum.

Ovadia, S. *et al.* (2005) The cell-surface isoform of colony stimulating factor 1 (CSF1) restores but does not completely normalize fecundity in CSF1-deficient mice. *Biol. Reprod.* **74**:331.

Sample(s) Tested: homogenized mouse bone, brain, lung, kidney and uterus tissue.

MEK

Cell-Based ELISA Human/Mouse

Phospho-MEK1 (S218/S222)/MEK2 (S222/S226)

Catalog # **KCB2506**

Sample Volume: 100 μ L

Validated Sample Type(s): whole cells.

β_2 -Microglobulin/ β_2 M

Quantikine IVD Human β_2 -Microglobulin ELISA

Catalog # **DBM200**

Sensitivity: 0.2 μ g/mL

Range: 0.4-12 μ g/mL

Sample Volume: 20 μ L

Validated Sample Type(s): serum, urine.

Gross, M. *et al.* (2007) β_2 -microglobulin is an androgen-regulated secreted protein elevated in serum of patients with advanced prostate cancer. *Clin. Cancer Res.* **13**:1979.

Sample(s) Tested: human serum.

Huang, W.C. *et al.* (2006) β_2 -microglobulin is a signaling and growth-promoting factor for human prostate cancer bone metastasis. *Cancer Res.* **66**:9108.

Sample(s) Tested: C4-284 human prostate cancer cell culture supernate.

MMP-1

Fluorokine E Human Active MMP-1 ELISA

Catalog # **F1M00**

Sensitivity: 0.15 ng/mL

Range: 0.39-25 ng/mL

Sample Volume: 150 μ L

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.

Lee, Y.R. *et al.* (2009) Inhibition of IL-1 β -mediated inflammatory responses by the I κ B- α super-repressor in human fibroblast-like synoviocytes. *Biochem. Biophys. Res. Commun.* **378**:90.

Sample(s) Tested: human fibroblast-like synoviocyte cell culture supernate.

Cao, Q. *et al.* (2007) Leptin represses matrix metalloproteinase-1 gene expression in LX2 human hepatic stellate cells. *J. Hepatol.* **46**:124.

Sample(s) Tested: LX2 human hepatic stellate cell culture supernate.

Singh, S. *et al.* (2004) CXCL12-CXCR4 interactions modulate prostate cancer cell migration, metalloproteinase expression and invasion. *Lab. Invest.* **84**:1666.

Sample(s) Tested: PC3, LNCaP, and PrEC human prostate cancer cell culture supernates.

Quantikine Human Pro-MMP-1 ELISA

Catalog # **DMP100***

Sensitivity: 0.095 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.

Agarwal, A. *et al.* (2008) Targeting a metalloprotease-PAR1 signaling system with cell-penetrating pepducins inhibits angiogenesis, ascites, and progression of ovarian cancer. *Mol. Cancer Ther.* **7**:2746.

Sample(s) Tested: human ovarian/hepatic ascities, ovarian cystic fluid, pleural effusion, OVCAR-4 human ovarian cancer cell culture supernate.

MMP-1 continued

Attur, M. *et al.* (2008) Prostaglandin E2 exerts catabolic effects in osteoarthritis cartilage: evidence for signaling via the EP4 receptor. *J. Immunol.* **181**:5082.

Sample(s) Tested: human osteoarthritic cartilage explant cell culture supernate.

Rosas, I.O. *et al.* (2008) MMP1 and MMP7 as potential peripheral blood biomarkers in idiopathic pulmonary fibrosis. *PLoS Med.* **5**:e93.

Sample(s) Tested: human serum and plasma.

Sundararaj, K.P. *et al.* (2008) Simvastatin suppresses LPS-induced MMP-1 expression in U937 mononuclear cells by inhibiting protein isoprenylation-mediated ERK activation. *J. Leukoc. Biol.* **84**:1120.

Sample(s) Tested: U937 human leukemic monocyte lymphoma cell culture supernate.

Park, Y.H. *et al.* (2008) Ets-1 upregulates HER2-induced MMP-1 expression in breast cancer cells. *Biochem. Biophys. Res. Commun.* **377**:389.

Sample(s) Tested: MCF-7 human breast cancer cell culture supernate.

MMP-2**Quantikine Human MMP-2 ELISA**Catalog # **DMP2F0***

Sensitivity: 0.289 ng/mL

Range: 0.78-50 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.

Xu, S-Z. *et al.* (2008) TRPC channel activation by extracellular thioredoxin. *Nature* **451**:69.

Sample(s) Tested: human fibroblast-like synoviocyte cell culture supernate.

MMP-3**Quantikine Human Total MMP-3 ELISA**Catalog # **DMP300***

Sensitivity: 0.045 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.

Samnegård, A. *et al.* (2009) Gender specific associations between matrix metalloproteinases and inflammatory markers in post myocardial infarction patients. *Atherosclerosis* **202**:550.

Sample(s) Tested: human serum.

Lee, Y.R. *et al.* (2009) Inhibition of IL-1β-mediated inflammatory responses by the IκB-α super-repressor in human fibroblast-like synoviocytes. *Biochem. Biophys. Res. Commun.* **378**:90.

Sample(s) Tested: human fibroblast-like synoviocyte cell culture supernate.

Okabe, Y. *et al.* (2008) IFN regulatory factor (IRF) 3/7-dependent and -independent gene induction by mammalian DNA that escapes degradation. *Eur. J. Immunol.* **38**:3150.

Sample(s) Tested: human serum.

Agarwal, A. *et al.* (2008) Targeting a metalloprotease-PAR1 signaling system with cell-penetrating pepducins inhibits angiogenesis, ascites, and progression of ovarian cancer. *Mol. Cancer Ther.* **7**:2746.

Sample(s) Tested: human ovarian/hepatic ascities, ovarian cystic fluid, pleural effusion, OVCAR-4 human ovarian cancer cell culture supernate.

Romi, F.R. *et al.* (2008) Serum matrix metalloproteinase-3 levels are elevated in myasthenia gravis. *J. Neuroimmunol.* **195**:96.

Sample(s) Tested: human serum.

Quantikine Mouse Total MMP-3 ELISACatalog # **MMP300**

Sensitivity: 0.053 ng/mL

Range: 0.312-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum.

Chen, L. *et al.* (2009) Basigin-mediated gene expression changes in mouse uterine stromal cells during implantation. *Endocrinology* **150**:966.

Sample(s) Tested: mouse stromal cell culture supernate.

Davis, D.R. *et al.* (2007) The development of cardiac fibrosis in low tissue factor mice is gender-dependent and is associated with differential regulation of urokinase plasminogen activator. *J. Mol. Cell. Cardiol.* **42**:559.

Sample(s) Tested: homogenized mouse heart tissue.

MMP-7**Quantikine Human Total MMP-7 ELISA**Catalog # **DMP700***

Sensitivity: 0.094 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), saliva, serum, urine.

Dunn, K.M. *et al.* (2009) Inhibition of hyaluronan synthases decreases matrix metalloproteinase-7 (MMP-7) expression and activity. *Surgery* **145**:322.

Sample(s) Tested: SW620 human colon cancer cell culture supernate.

Jung, K. *et al.* (2008) Circulating matrix metalloproteinase-7: an early or metastatic marker for renal cell carcinoma? *Clin. Chem.* **54**:1927.

Sample(s) Tested: human plasma.

Rosas, I.O. *et al.* (2008) MMP1 and MMP7 as potential peripheral blood biomarkers in idiopathic pulmonary fibrosis. *PLoS Med.* **5**:e93.

Sample(s) Tested: human serum and plasma.

Huh, J.W. *et al.* (2007) Is metalloproteinase-7 specific for idiopathic pulmonary fibrosis? *Chest* **133**:1101.

Sample(s) Tested: human BALF.

Hawinkels, L.J. *et al.* (2007) Determination of matrilysin activity in gastrointestinal neoplasia. *Eur. J. Clin. Invest.* **37**:598.

Sample(s) Tested: homogenized human gastric mucosa tissue.

MMP-8**Quantikine Human Total MMP-8 ELISA**Catalog # **DMP800***

Sensitivity: 0.06 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (heparin), saliva, serum.

Sundararaj, K.P. *et al.* (2008) Simvastatin suppresses LPS-induced MMP-1 expression in U937 mononuclear cells by inhibiting protein isoprenylation-mediated ERK activation. *J. Leukoc. Biol.* **84**:1120.

Sample(s) Tested: U937 human leukemic monocyte lymphoma cell culture supernate.



Agarwal, A. *et al.* (2008) Targeting a metalloprotease-PAR1 signaling system with cell-penetrating pепducins inhibits angiogenesis, ascites, and progression of ovarian cancer. *Mol. Cancer Ther.* **7**:2746.

Sample(s) Tested: human ovarian/hepatic ascities, ovarian cystic fluid, pleural effusion, OVCAR-4 human ovarian cancer cell culture supernate.

Dorweiler, B. *et al.* (2008) Subendothelial infiltration of neutrophil granulocytes and liberation of matrix-destabilizing enzymes in an experimental model of human neointima. *Thromb. Haemost.* **99**:373.

Sample(s) Tested: human neutrophil cell culture supernate.

Gaggar, A. *et al.* (2007) Matrix metalloprotease-9 dysregulation in lower airway secretions of cystic fibrosis patients. *Am. J. Physiol. Lung Cell Mol. Physiol.* **293**:L96.

Sample(s) Tested: human sputum.

Miranda, L.A. *et al.* (2006) Changes in periodontal and rheumatological conditions after 2 years in patients with juvenile idiopathic arthritis. *J. Periodontol.* **77**:1695.

Sample(s) Tested: human gingival crevicular fluid.

MMP-9

Fluorokine E Human Active MMP-9 ELISA

Catalog # **F9M00**

Sensitivity: 0.01 ng/mL

Range: 0.25-16 ng/mL

Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum, urine.

Hardison, M.T. *et al.* (2009) The presence of a matrix-derived neutrophil chemoattractant in bronchiolitis obliterans syndrome after lung transplantation. *J. Immunol.* **182**:4423.

Sample(s) Tested: human BALF.

Wang, Z. *et al.* (2009) Acquisition of epithelial-mesenchymal transition phenotype of gemcitabine-resistant pancreatic cancer cells is linked with activation of the notch signaling pathway. *Cancer Res.* **69**:2400.

Sample(s) Tested: GS human pancreatic cancer cell lysate.

Wang, Z. *et al.* (2008) TW-37, a small-molecule inhibitor of Bcl-2, inhibits cell growth and invasion in pancreatic cancer. *Int. J. Cancer* **123**:958.

Sample(s) Tested: Colo-357 human pancreatic cancer cell culture supernate.

Zou, Y. *et al.* (2007) Targeting matrix metalloproteinases and endothelial cells with a fusion peptide against tumor. *Cancer Res.* **67**:7295.

Sample(s) Tested: human endothelial cell culture supernate.

Wang, Z. *et al.* (2006) Down-regulation of notch-1 inhibits invasion by inactivation of nuclear factor-κB, vascular endothelial growth factor, and matrix metalloproteinase-9 in pancreatic cancer cells. *Cancer Res.* **66**:2778.

Sample(s) Tested: BxPC-3 human pancreatic cancer cell lysate.

Quantikine Human MMP-9 ELISA

Catalog # **DMP900***

Sensitivity: 0.156 ng/mL

Range: 0.312-20 ng/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (heparin), saliva, serum, urine.

Samnegård, A. *et al.* (2009) Gender specific associations between matrix metalloproteinases and inflammatory markers in post myocardial infarction patients. *Atherosclerosis* **202**:550.

Sample(s) Tested: human serum.

Rodriguez, P.C. *et al.* (2009) Arginase I-producing myeloid-derived suppressor cells in renal cell carcinoma are a subpopulation of activated granulocytes. *Cancer Res.* **69**:1553.

Sample(s) Tested: human plasma.

Ankersmit, H.J. *et al.* (2009) Irradiated cultured apoptotic peripheral blood mononuclear cells regenerate infarcted myocardium. *Eur. J. Clin. Invest.* **39**:445.

Sample(s) Tested: human peripheral blood mononuclear cell culture supernate.

Feng, W. *et al.* (2008) The angiogenic response is dictated by β3 integrin on bone marrow-derived cells. *J. Cell Biol.* **183**:1145.

Sample(s) Tested: mouse bone marrow aspirate cell lysate.

Coral, K. *et al.* (2008) Lysyl oxidase activity in the ocular tissues and the role of LOX in proliferative diabetic retinopathy and rhegmatogenous retinal detachment. *Invest. Ophthalmol. Vis. Sci.* **49**:4746.

Sample(s) Tested: human vitreous humor.

Quantikine Mouse Total MMP-9 ELISA

Catalog # **MMPT90**

Sensitivity: 0.014 ng/mL

Range: 0.078-5 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.

Wang, P. *et al.* (2008) Matrix metalloproteinase 9 facilitates West Nile virus entry into the brain. *J. Virol.* **82**:8978.

Sample(s) Tested: mouse serum.

Quantikine Mouse Pro-MMP-9 ELISA

Catalog # **MMP900B**

Sensitivity: 14 pg/mL

Range: 31.3-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin), serum.

MMP-9/NGAL Complex

Quantikine Human MMP9/NGAL Complex ELISA

Catalog # **DM9L20**

Sensitivity: 0.058 ng/mL

Range: 0.312-20 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), saliva, serum, urine.

Diamanti-Kandarakis, E. *et al.* (2008) Serum concentrations of atherogenic proteins neutrophil gelatinase-associated lipocalin and its complex with matrix metalloproteinase-9 are significantly lower in women with polycystic ovary syndrome: hint of a protective mechanism? *Eur. J. Endocrinol.* **158**:525.

Sample(s) Tested: human serum.

Smith, E.R. *et al.* (2008) Urinary biomarkers predict brain tumor presence and response to therapy. *Clin. Cancer Res.* **14**:2378.

Sample(s) Tested: human urine, human CSF.

Sunk, I.G. *et al.* (2007) Increased expression of discoidin domain receptor 2 is linked to the degree of cartilage damage in human knee joints: a potential role in osteoarthritis pathogenesis. *Arthritis Rheum.* **56**:3685.

Sample(s) Tested: human plasma, human articular chondrocyte cell culture supernate.

Folkesson, M. *et al.* (2007) Presence of NGAL/MMP-9 complexes in human abdominal aortic aneurysms. *Thromb. Haemost.* **98**:427.

Sample(s) Tested: homogenized human abdominal aortic aneurysm tissue.

MMP9/NGAL Complex continued

Martin-Ventura, J.L. *et al.* (2006) Low plasma levels of HSP70 in patients with carotid atherosclerosis are associated with increased levels of proteolytic markers of neutrophil activation. *Atherosclerosis* **194**:334.

Sample(s) Tested: human plasma, human carotid endartery explant cell culture supernate.

MMP-10**Quantikine Human Pro-MMP-10 ELISA**Catalog # **DM1000**

Sensitivity: 15.1 pg/mL

Range: 78.1-5000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), serum.

McLennan, S.V. *et al.* (2007) Advanced glycation end products decrease mesangial cell MMP-7: a role in matrix accumulation in diabetic nephropathy? *Kidney Int.* **72**:481.

Sample(s) Tested: human mesangial cell culture supernate.

Barksby, H.E. *et al.* (2006) Matrix metalloproteinase 10 promotion of collagenolysis via procollagenase activation: implications for cartilage degradation in arthritis. *Arthritis Rheum.* **54**:3244.

Sample(s) Tested: human synovial fluid.

Montero, I. *et al.* (2006) C-reactive protein induces matrix metalloproteinase-1 and -10 in human endothelial cells. *J. American Col. Cardiol.* **47**:1369.

Sample(s) Tested: human endothelial cell culture supernate.

Behera, A.K. *et al.* (2005) Induction of host matrix metalloproteinases by *Borrelia burgdorferi* differs in human and murine lyme arthritis. *Infect. Immun.* **73**:126.

Sample(s) Tested: human synovial fluid, human chondrocyte cell culture supernate.

Singh, S. *et al.* (2004) CXCL12-CXCR4 interactions modulate prostate cancer cell migration, metalloproteinase expression and invasion. *Lab. Invest.* **84**:1668.

Sample(s) Tested: PC3, LNCaP, and PrEC human prostate cancer cell culture supernates.

MMP-13**Fluorokine E Human Active MMP-13 ELISA**Catalog # **F13M00**

Sensitivity: 0.015 ng/mL

Range: 0.25-16 ng/mL

Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate.

Attur, M.G. *et al.* (2009) F-spondin, a neuroregulatory protein, is up-regulated in osteoarthritis and regulates cartilage metabolism via TGF-β activation. *FASEB J.* **23**:79.

Sample(s) Tested: human chondrocyte cell culture supernate.

Singh, S. *et al.* (2004) CXCL12-CXCR4 interactions modulate prostate cancer cell migration, metalloproteinase expression and invasion. *Lab. Invest.* **84**:1666.

Sample(s) Tested: PC3, LNCaP, and PrEC human prostate cancer cell culture supernates.

Quantikine Human Pro-MMP-13 ELISACatalog # **DM1300***

Sensitivity: 21.3 pg/mL

Range: 78-5000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate.

Yammani, R.R. *et al.* (2009) Interleukin-7 stimulates secretion of S100A4 by activating the JAK/STAT signaling pathway in human articular chondrocytes. *Arthritis Rheum.* **60**:792.

Sample(s) Tested: human chondrocyte cell culture supernate.

Agarwal, A. *et al.* (2008) Targeting a metalloprotease-PAR1 signaling system with cell-penetrating pepducins inhibits angiogenesis, ascites, and progression of ovarian cancer. *Mol. Cancer Ther.* **7**:2746.

Sample(s) Tested: human ovarian/hepatic ascities, ovarian cystic fluid, pleural effusion, OVCAR-4 human ovarian cancer cell culture supernate.

Zayed, N. *et al.* (2008) Inhibition of interleukin-1β-induced matrix metalloproteinases 1 and 13 production in human osteoarthritic chondrocytes by prostaglandin D2. *Arthritis Rheum.* **58**:3530.

Sample(s) Tested: human chondrocyte cell culture supernate.

Attur, M. *et al.* (2008) Prostaglandin E2 exerts catabolic effects in osteoarthritis cartilage: evidence for signaling via the EP4 receptor. *J. Immunol.* **181**:5082.

Sample(s) Tested: human osteoarthritic cartilage explant cell culture supernate.

Im, H.J. *et al.* (2007) Basic fibroblast growth factor stimulates matrix metalloproteinase-13 via the molecular cross-talk between the mitogen-activated protein kinases and protein kinase Cdelta pathways in human adult articular chondrocytes. *J. Biol. Chem.* **282**:11110.

Sample(s) Tested: human synovial fluid.

Myeloperoxidase/MPO**Quantikine Human MPO ELISA**Catalog # **DMYE00**

Sensitivity: 0.618 ng/mL

Range: 1.56-100 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): breast milk, cell culture supernate, cell lysate, plasma (EDTA, heparin), saliva, serum, urine.

Hothersall, E.J. *et al.* (2008) Effects of atorvastatin added to inhaled corticosteroids on lung function and sputum cell counts in atopic asthma. *Thorax* **63**:1070.

Sample(s) Tested: human sputum.

Tziakias, D.N. *et al.* (2008) Interleukin-8 is increased in the membrane of circulating erythrocytes in patients with acute coronary syndrome. *Eur. Heart J.* **29**:2713.

Sample(s) Tested: human plasma.

Miller, M. *et al.* (2007) Computed tomographic scan-diagnosed chronic obstructive pulmonary disease-emphysema: eotaxin-1 is associated with bronchodilator response and extent of emphysema. *J. Allergy Clin. Immunol.* **120**:1118.

Sample(s) Tested: human BALF.



Nitric Oxide

Parameter Multi-species Nitrite/ Nitrate & Total NO ELISA

Catalog # **KGE001**

Sensitivity: 0.78 µmol/L

Range: 3.12-200 µmol/L

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.

Lema, G. *et al.* (2009) Decreased nitric oxide products in the urine of patients undergoing cardiac surgery. *J. Cardiothorac. Vasc. Anesth.* **23**:188.

Sample(s) Tested: human urine.

Gaucher-Di Stasio, C. *et al.* (2009) The importance of the effect of shear stress on endothelial cells in determining the performance of hemoglobin-based oxygen carriers. *Biomaterials* **30**:445.

Sample(s) Tested: human umbilical vein endothelial cell culture supernate.

Tjønnå, A.E. *et al.* (2009) Aerobic interval training reduces cardiovascular risk factors more than a multitreatment approach in overweight adolescents. *Clin. Sci.* **116**:317.

Sample(s) Tested: human plasma (heparin).

Kuhad, A. and K. Chopra (2009) Attenuation of diabetic nephropathy by tocotrienol: involvement of NFκB signaling pathway. *Life Sci.* **84**:296.

Sample(s) Tested: homogenized rat kidney tissue.

Sabatier, M.J. *et al.* (2008) Leptin, blood pressure, and aerobic capacity in women. *Am. J. Hypertens.* **21**:1245.

Sample(s) Tested: human serum.

endothelial Nitric Oxide Synthase/eNOS

Quantikine Human eNOS ELISA

Catalog # **DEN00**

Sensitivity: 25 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell lysate.

Andersen, M.R. *et al.* (2009) Smoking cessation early in pregnancy and birth weight, length, head circumference, and endothelial nitric oxide synthase activity in umbilical and chorionic vessels: an observational study of healthy singleton pregnancies. *Circulation* **119**:857.

Sample(s) Tested: human fetal embryonic cord cell lysate.

Fujii, T. *et al.* (2008) Statins restore ischemic limb blood flow in diabetic microangiopathy via eNOS/NO upregulation but not via PDGF-BB expression. *Am. J. Physiol. Heart Circ. Physiol.* **294**:H2785.

Sample(s) Tested: homogenized human muscle tissue, human umbilical vein endothelial cell lysate.

Cokic, V.P. *et al.* (2007) Hydroxyurea nitrosylates and activates soluble guanylyl cyclase in human erythroid cells. *Blood* **111**:1117.

Sample(s) Tested: human erythroid cell lysate.

Ostergaard, L. *et al.* (2007) Diminished NO release in chronic hypoxic human endothelial cells. *Am. J. Physiol. Heart Circ. Physiol.* **293**:H2894.

Sample(s) Tested: human umbilical vein endothelial cell lysate.

Noor, R. *et al.* (2007) High-density lipoprotein cholesterol regulates endothelial progenitor cells by increasing eNOS and preventing apoptosis. *Atherosclerosis* **192**:92.

Sample(s) Tested: human endothelial progenitor cell lysate.

inducible Nitric Oxide Synthase/iNOS

Quantikine Human iNOS ELISA

Catalog # **DNS00**

Sensitivity: 0.46 U/mL

Range: 1.25-80 U/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell lysate.

Hama, S. *et al.* (2008) Nitric oxide attenuates vascular endothelial cadherin-mediated vascular integrity in human chronic inflammation. *Clin. Exp. Immunol.* **154**:384.

Sample(s) Tested: human umbilical vein endothelial cell lysate.

Yamaguchi, N. *et al.* (2006) Time-dependent expression of renal vaso-regulatory molecules in LPS-induced endotoxemia in rat. *Peptides* **27**:2258.

Sample(s) Tested: homogenized rat kidney tissue, rat plasma.

Demoule, A. *et al.* (2006) Endotoxin triggers nuclear factor-κB-dependent up-regulation of multiple proinflammatory genes in the diaphragm. *Am. J. Respir. Crit. Care Med.* **174**:646.

Sample(s) Tested: homogenized mouse diaphragm tissue.

E., Y. *et al.* (2006) Neuropeptide (calcitonin gene-related peptide) induction of nitric oxide in human keratinocytes *in vitro*. *J. Invest. Dermatol.* **126**:1994.

Sample(s) Tested: DLD-1 human colon cancer cell lysate.

Packiasamy, A.R.J. *et al.* (2004) Combined effect of testosterone and apocynin on nitric oxide and superoxide production in PMA-differentiated THP-1 cells. *Biochim. Biophys. Acta* **1693**:185.

Sample(s) Tested: THP-1 human acute monocytic leukemia cell culture supernate.

Osteopontin/OPN

Quantikine Human OPN ELISA

Catalog # **DOST00***

Sensitivity: 0.024 ng/mL

Range: 0.312-20 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), urine.

Bertola, A. *et al.* (2009) Elevated expression of osteopontin may be related to adipose tissue macrophage accumulation and liver steatosis in morbid obesity. *Diabetes* **58**:125.

Sample(s) Tested: human serum.

Castellano, G. *et al.* (2008) Activation of the osteopontin/matrix metalloproteinase-9 pathway correlates with prostate cancer progression. *Clin. Cancer Res.* **14**:7470.

Sample(s) Tested: human plasma (heparin).

Corvol, J.C. *et al.* (2008) Abrogation of T cell quiescence characterizes patients at high risk for multiple sclerosis after the initial neurological event. *Proc. Natl. Acad. Sci. U.S.A.* **105**:11839.

Sample(s) Tested: human plasma.

Lee, C.Y. *et al.* (2008) Marrow osteopontin level as a prognostic factor in acute myeloid leukaemia. *Br. J. Haematol.* **141**:736.

Sample(s) Tested: human bone marrow.

Osteopontin/OPN continued

Dower, K. *et al.* (2008) Innate immune responses to TREM-1 activation: overlap, divergence, and positive and negative cross-talk with bacterial lipopolysaccharide. *J. Immunol.* **180**:3520.

Sample(s) Tested: human monocyte cell culture supernate.

Quantikine Mouse OPN ELISACatalog # **MOST00**

Sensitivity: 8.5 pg/mL

Range: 39-2500 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

Barak, V. *et al.* (2007) Using the direct-injection model of early uveal melanoma hepatic metastasis to identify TPS as a potentially useful serum biomarker. *Invest. Ophthalmol. Vis. Sci.* **48**:4399.

Sample(s) Tested: mouse serum.

Shao, J. *et al.* (2007) Heterozygous disruption of the PTEN promotes intestinal neoplasia in APC^{min/+} mouse: roles of osteopontin. *Carcinogenesis* **28**:2476.

Sample(s) Tested: RIE-iHa-Ras rat intestinal epithelial cell culture supernate.

Briscoe, C.P. *et al.* (2007) LPS-induced biomarkers in mice: a potential model for identifying insulin sensitizers. *Biochem. Biophys. Res. Commun.* **361**:140.

Sample(s) Tested: mouse plasma.

Osteoprotegerin/TNFRSF11B**Quantikine Mouse Osteoprotegerin/
TNFRSF11B ELISA**Catalog # **MOP00**

Sensitivity: 4.5 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Pierroz, D.D. *et al.* (2009) β -Arrestin2 regulates RANKL and ephrins gene expression in response to bone remodeling in mice. *J. Bone Miner. Res.* **24**:775.

Sample(s) Tested: mouse bone marrow osteoblast cell culture supernate.

Aliprantis, A.O. *et al.* (2008) NFATc1 in mice represses osteoprotegerin during osteoclastogenesis and dissociates systemic osteopenia from inflammation in cherubism. *J. Clin. Invest.* **118**:3775.

Sample(s) Tested: mouse serum.

Wiren, K.M. *et al.* (2008) Targeting of androgen receptor in bone reveals a lack of androgen anabolic action and inhibition of osteogenesis: a model for compartment-specific androgen action in the skeleton. *Bone* **43**:440.

Sample(s) Tested: mouse serum.

Qiang, Y.W. *et al.* (2008) Myeloma-derived Dickkopf-1 disrupts Wnt-regulated osteoprotegerin and RANKL production by osteoblasts: a potential mechanism underlying osteolytic bone lesions in multiple myeloma. *Blood* **112**:196.

Sample(s) Tested: C2C12 mouse myoblast cell culture supernate.

Morony, S. *et al.* (2008) Osteoprotegerin inhibits vascular calcification without affecting atherosclerosis in *Ldlr*^{-/-} mice. *Circulation* **117**:411.

Sample(s) Tested: mouse plasma (EDTA).

p38**Cell-Based ELISA Human/Mouse
Phospho-p38 MAP Kinase (T180/Y182)**Catalog # **KCB869**

Sample Volume: 100 μ L

Validated Sample Type(s): whole cells.

p38 α **Surveyor IC Human/Mouse/Rat
Phospho-p38 α (T180/Y182) ELISA**Catalog # **SUV869**

Range: 62.5-4000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell lysate.

Hao, S. *et al.* (2007) Gene transfer to interfere with TNF- α signaling in neuropathic pain. *Gene Ther.* **14**:1010.

Sample(s) Tested: homogenized rat spinal cord tissue.

p70 S6 Kinase**Cell-Based ELISA Human/Mouse
Phospho-p70 S6 Kinase (T389)**Catalog # **KCB8963**

Sample Volume: 100 μ L

Validated Sample Type(s): whole cells.

Pappalysin-1/PAPP-A**Quantikine Human Pappalysin-1/PAPP-A ELISA**Catalog # **DPPA00**

Sensitivity: 0.116 ng/mL

Range: 0.78-50 ng/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Nishizawa, H. *et al.* (2008) Increased levels of pregnancy-associated plasma protein-A2 in the serum of pre-eclamptic patients. *Mol. Hum. Reprod.* **14**:595.

Sample(s) Tested: human serum.

PDGF-AA**Quantikine Human/Mouse PDGF-AA ELISA**Catalog # **DAA00B**

Sensitivity: 6.29 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin), saliva, serum.

Ryman-Rasmussen, J.P. *et al.* (2009) Inhaled multiwalled carbon nanotubes potentiate airway fibrosis in murine allergic asthma. *Am. J. Respir. Cell Mol. Biol.* **40**:349.

Sample(s) Tested: mouse BALF.



Mathew, P. *et al.* (2008) Dynamic change in phosphorylated platelet-derived growth factor receptor in peripheral blood leukocytes following docetaxel therapy predicts progression-free and overall survival in prostate cancer. *Br. J. Cancer* **99**:1426.

Sample(s) Tested: human plasma.

Kilian, O. *et al.* (2008) Observations on the microvasculature of bone defects filled with biodegradable nanoparticulate hydroxyapatite. *Biomaterials* **29**:3429.

Sample(s) Tested: porcine plasma.

Liem-Moolenaar, M. *et al.* (2008) Pharmacodynamics and pharmacokinetics of the novel thrombopoietin mimetic peptide RWJ-800088 in humans. *Clin. Pharmacol. Ther.* **84**:481.

Sample(s) Tested: human plasma.

PDGF-AB

Quantikine Human PDGF-AB ELISA

Catalog # **DHD00B***

Sensitivity: 5.9 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, serum, platelet-poor plasma (EDTA, heparin).

Mathew, P. *et al.* (2008) Dynamic change in phosphorylated platelet-derived growth factor receptor in peripheral blood leukocytes following docetaxel therapy predicts progression-free and overall survival in prostate cancer. *Br. J. Cancer* **99**:1426.

Sample(s) Tested: human plasma.

Kanter, J. *et al.* (2008) Oncogenic and angiogenic growth factors accumulate during routine storage of apheresis platelet concentrates. *Clin. Cancer Res.* **14**:3942.

Sample(s) Tested: human plasma, platelet-poor plasma, and platelet concentrate.

Mottet, D. *et al.* (2007) Histone deacetylase 7 silencing alters endothelial cell migration, a key step in angiogenesis. *Circ. Res.* **101**:1237.

Sample(s) Tested: human umbilical cord endothelial cell culture supernate.

Yashiro, M. *et al.* (2007) Selective cyclooxygenase-2 inhibitor downregulates the paracrine epithelial-mesenchymal interactions of growth in scirrhous gastric carcinoma. *Int. J. Cancer* **120**:686.

Sample(s) Tested: NF-21 human gastric fibroblast cell and OCUM-2M human gastric cancer cell culture supernates.

Liu, L. *et al.* (2006) Corneal epitheliotropic capacity of three different blood-derived preparations. *Invest. Ophthalmol. Vis. Sci.* **47**:2438.

Sample(s) Tested: human plasma (CPDA), human serum, human platelet cell culture supernate.

Quantikine Mouse/Rat PDGF-AB ELISA

Catalog # **MHD00**

Sensitivity: 3.8 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin), serum.

Oku, H. *et al.* (2008) Antifibrotic action of pirfenidone and prednisolone: different effects on pulmonary cytokines and growth factors in bleomycin-induced murine pulmonary fibrosis. *Eur. J. Pharmacol.* **590**:400.

Sample(s) Tested: homogenized mouse lung tissue.

Kilian, O. *et al.* (2008) Observations on the microvasculature of bone defects filled with biodegradable nanoparticulate hydroxyapatite. *Biomaterials* **29**:3429.

Sample(s) Tested: mouse plasma.

Paintlia, A.S. *et al.* (2008) Inhibition of rho family functions by lovastatin promotes myelin repair in ameliorating experimental autoimmune encephalomyelitis. *Mol. Pharmacol.* **73**:1381.

Sample(s) Tested: rat serum.

He, M. *et al.* (2007) The role of the receptor for advanced glycation end-products in lung fibrosis. *Am. J. Physiol. Lung Cell Mol. Physiol.* **293**:L1427.

Sample(s) Tested: mouse BALF.

Ebos, J.M. *et al.* (2007) Multiple circulating proangiogenic factors induced by sunitinib malate are tumor-independent and correlate with antitumor efficacy. *Proc. Natl. Acad. Sci. U.S.A.* **104**:17069.

Sample(s) Tested: mouse plasma.

PDGF-BB

Quantikine Human PDGF-BB ELISA

Catalog # **DBB00***

Sensitivity: 15 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin), serum.

Mathew, P. *et al.* (2008) Dynamic change in phosphorylated platelet-derived growth factor receptor in peripheral blood leukocytes following docetaxel therapy predicts progression-free and overall survival in prostate cancer. *Br. J. Cancer* **99**:1426.

Sample(s) Tested: human plasma.

Korpisalo, P. *et al.* (2008) Vascular endothelial growth factor-A and platelet-derived growth factor-B combination gene therapy prolongs angiogenic effects via recruitment of interstitial mononuclear cells and paracrine effects rather than improved pericyte coverage of angiogenic vessels. *Circ. Res.* **103**:1092.

Sample(s) Tested: homogenized human muscle tissue.

Zhang, R. *et al.* (2008) Network model of survival signaling in large granular lymphocyte leukemia. *Proc. Natl. Acad. Sci. U.S.A.* **105**:16308.

Sample(s) Tested: human serum.

Treiber, G. *et al.* (2008) Imatinib for hepatocellular cancer—focus on pharmacokinetic/pharmacodynamic modelling and liver function. *Cancer Lett.* **260**:146.

Sample(s) Tested: human plasma.

Kilian, O. *et al.* (2008) Observations on the microvasculature of bone defects filled with biodegradable nanoparticulate hydroxyapatite. *Biomaterials* **29**:3429.

Sample(s) Tested: porcine plasma.

Quantikine Mouse/Rat PDGF-BB ELISA

Catalog # **MBB00**

Sensitivity: 19.3 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Fujii, T. *et al.* (2008) Statins restore ischemic limb blood flow in diabetic microangiopathy via eNOS/NO upregulation but not via PDGF-BB expression. *Am. J. Physiol. Heart Circ. Physiol.* **294**:H2785.

Sample(s) Tested: homogenized mouse muscle tissue.

PDGF-BB continued

Robinson, S.P. *et al.* (2008) The effects of tumor-derived platelet-derived growth factor on vascular morphology and function *in vivo* revealed by susceptibility MRI. *Int. J. Cancer* **122**:1548.

Sample(s) Tested: B16 mouse melanoma cell culture supernate.

Klopp, A.H. *et al.* (2007) Tumor irradiation increases the recruitment of circulating mesenchymal stem cells into the tumor microenvironment. *Cancer Res.* **67**:11687.

Sample(s) Tested: 4T1 mouse mammary carcinoma cell culture supernate.

He, M. *et al.* (2007) The role of the receptor for advanced glycation end-products in lung fibrosis. *Am. J. Physiol. Lung Cell Mol. Physiol.* **293**:L1427.

Sample(s) Tested: mouse BALF.

Ebos, J.M. *et al.* (2007) Multiple circulating proangiogenic factors induced by sunitinib malate are tumor-independent and correlate with antitumor efficacy. *Proc. Natl. Acad. Sci. U.S.A.* **104**:17069.

Sample(s) Tested: mouse plasma.

PDGF R β **Cell-Based ELISA Human Phospho-PDGF R β (Y751) Catalog # KCB1767**

Sample Volume: 100 μ L

Validated Sample Type(s): whole cells.

Cell-Based ELISA Human Phospho-PDGF R β (Y1021) Catalog # KCB2316

Sample Volume: 100 μ L

Validated Sample Type(s): whole cells.

Cell-Based ELISA Mouse Phospho-PDGF R β (Y1021) Catalog # KCB1042

Sample Volume: 100 μ L

Validated Sample Type(s): whole cells.

Pentraxin 3/TSG-14**Quantikine Human Pentraxin 3/TSG-14 ELISA Catalog # DPTX30**

Sensitivity: 0.116 ng/mL

Range: 0.31-20 ng/mL

Sample Volume: 20 μ L

Validated Sample Type(s): cell culture supernate (serum-free), plasma (EDTA), saliva.

May, L. *et al.* (2010) Genetic variation in pentraxin (PTX) 3 gene associates with PTX3 production and fertility in women. *Biol. Reprod.* **82**:299.

Sample(s) Tested: LPS-stimulated whole blood.

Quantikine Mouse Pentraxin 3/TSG-14 ELISA Catalog # MPTX30

Sensitivity: 0.02 ng/mL

Range: 0.23-15 ng/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Souza, D.G. *et al.* (2009) The long pentraxin PTX3 is crucial for tissue inflammation after intestinal ischemia and reperfusion in mice. *Am. J. Pathol.* **174**:1309.

Sample(s) Tested: mouse intestinal tissue, mouse serum.

Periostin/OSF-2**Quantikine Mouse Periostin/OSF-2 ELISA Catalog # MOSF20**

Sensitivity: 0.065 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (heparin, EDTA), serum.

PIGF**Quantikine Human PIGF ELISA Catalog # DPG00***

Sensitivity: 7 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.

Kalkunte, S.S. *et al.* (2009) Vascular endothelial growth factor C facilitates immune tolerance and endovascular activity of human uterine NK cells at the maternal-fetal interface. *J. Immunol.* **182**:4085.

Sample(s) Tested: human NK cell culture supernate.

Cassidy, A. *et al.* (2009) Potential role for plasma placental growth factor in predicting coronary heart disease risk in women. *Arterioscler. Thromb. Vasc. Biol.* **29**:134.

Sample(s) Tested: human plasma (heparin).

Fujii, T. *et al.* (2008) VEGF function for upregulation of endogenous PIGF expression during FGF-2-mediated therapeutic angiogenesis. *Atherosclerosis* **200**:51.

Sample(s) Tested: human umbilical vein endothelial cell culture supernate.

Manaster, I. *et al.* (2008) Endometrial NK cells are special immature cells that await pregnancy. *J. Immunol.* **181**:1869.

Sample(s) Tested: human endometrial lymphocyte cell culture supernate.

Rini, B.I. *et al.* (2008) Antitumor activity and biomarker analysis of sunitinib in patients with bevacizumab-refractory metastatic renal cell carcinoma. *J. Clin. Oncol.* **26**:3743.

Sample(s) Tested: human plasma.

Quantikine Human VEGF/PIGF Heterodimer ELISA Catalog # DVPH00

Sensitivity: 10.8 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Lee, C.Y. *et al.* (2007) Marrow angiogenesis-associated factors as prognostic biomarkers in patients with acute myelogenous leukaemia. *Br. J. Cancer* **97**:877.

Sample(s) Tested: human plasma.



PIGF-2

Quantikine Mouse PIGF-2 ELISA

Catalog # **MP200**

Sensitivity: 1.84 pg/mL

Range: 23.4-1500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Zhang, Z. *et al.* (2007) $\alpha 2\beta 1$ integrin expression in the tumor microenvironment enhances tumor angiogenesis in a tumor cell-specific manner. *Blood* **111**:1980.

Sample(s) Tested: LLC mouse lewis carcinoma cell and B16-F10 mouse melanoma cell culture supernates.

Ebos, J.M. *et al.* (2007) Multiple circulating proangiogenic factors induced by sunitinib malate are tumor-independent and correlate with antitumor efficacy. *Proc. Natl. Acad. Sci. U.S.A.* **104**:17069.

Sample(s) Tested: mouse plasma.

Cianfarani, F. *et al.* (2006) Placenta growth factor in diabetic wound healing: altered expression and therapeutic potential. *Am. J. Pathol.* **169**:1167.

Sample(s) Tested: homogenized mouse wound tissue.

Lijnen, H.R. *et al.* (2006) Impaired adipose tissue development in mice with inactivation of placental growth factor function. *Diabetes* **55**:2698.

Sample(s) Tested: homogenized mouse adipose tissue.

Jensen, K.K. *et al.* (2005) The human herpes virus 8-encoded chemokine receptor is required for angioproliferation in a murine model of Kaposi's sarcoma. *J. Immunol.* **174**:3686.

Sample(s) Tested: homogenized mouse ear tissue.

Pref-1/DLK-1/FA1

Quantikine Human Pref-1/DLK-1/FA1 ELISA

Catalog # **DPRF10**

Sensitivity: 0.034 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Progranulin

Quantikine Human Progranulin ELISA

Catalog # **DPGRNO**

Sensitivity: 0.54 ng/mL

Range: 1.56-100 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), saliva, serum, urine

Proprotein Convertase 9/PCSK9

Quantikine Human Proprotein Convertase 9/PCSK9 ELISA

Catalog # **DPC900**

Sensitivity: 0.219 ng/mL

Range: 0.625-40 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, cell lysates, plasma (EDTA, heparin), serum.

Quantikine Mouse Proprotein Convertase 9/PCSK9 ELISA

Catalog # **MPC900**

Sensitivity: 21.9 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, cell lysates, plasma (EDTA, heparin), serum.

Prostaglandin E₂

Parameter Multi-species Prostaglandin E₂ ELISA

Catalog # **KGE004B***

Sensitivity: 41.4 pg/mL

Range: 39-2500 pg/mL

Sample Volume: 150 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

Gonzalez, A.M. & R.A. Orlando (2008) Curcumin and resveratrol inhibit nuclear factor- κ B-mediated cytokine expression in adipocytes. *Nutr. Metab.* **5**:17.

Sample(s) Tested: 3T3-L1 mouse embryonic fibroblast-derived adipocyte cell culture supernate.

RAGE

Quantikine Human RAGE ELISA

Catalog # **DRG00***

Sensitivity: 16.14 pg/mL

Range: 78-5000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Makam, M. *et al.* (2009) Activation of critical, host-induced, metabolic and stress pathways marks neutrophil entry into cystic fibrosis lungs. *Proc. Natl. Acad. Sci. U.S.A.* **106**:5779.

Sample(s) Tested: human plasma, serum.

Calfee, C.S. *et al.* (2008) Plasma receptor for advanced glycation end products and clinical outcomes in acute lung injury. *Thorax* **63**:1083.

Sample(s) Tested: human plasma.

Hällström, L. *et al.* (2008) Nitric oxide inhalation and glucocorticoids as combined treatment in human experimental endotoxemia. *Crit. Care Med.* **36**:3043.

Sample(s) Tested: human plasma.

Rauci, A. *et al.* (2008) A soluble form of the receptor for advanced glycation endproducts (RAGE) is produced by proteolytic cleavage of the membrane-bound form by the sheddase a disintegrin and metalloprotease 10 (ADAM10). *FASEB J.* **22**:3716.

Sample(s) Tested: human serum.

RAGE continued

Rosas, I.O. *et al.* (2008) MMP1 and MMP7 as potential peripheral blood biomarkers in idiopathic pulmonary fibrosis. *PLoS Med.* **5**:e93.

Sample(s) Tested: human plasma and serum.

RBP4/Retinol-Binding Protein 4**Quantikine Human RBP4/Retinol-Binding Protein 4 ELISA**Catalog # **DRB400**

Sensitivity: 0.628 ng/mL

Range: 1.56-100 ng/mL

Sample Volume: 20 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum, urine.

Solini, A. *et al.* (2009) Retinol-binding protein-4 in women with untreated essential hypertension. *Am. J. Hypertens.* **22**:1001.

Sample(s) Tested: human serum.

Relaxin-2**Quantikine Human Relaxin-2 ELISA**Catalog # **DRL200**

Sensitivity: 4.57 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Anumba, D.O. *et al.* (2009) Serum relaxin levels are reduced in pregnant women with a history of recurrent miscarriage, and correlate with maternal uterine artery Doppler indices in first trimester. *Eur. J. Obstet. Gynecol. Reprod. Biol.* **147**:41.

Sample(s) Tested: human serum.

Resistin**Quantikine Human Resistin ELISA**Catalog # **DRSN00***

Sensitivity: 0.055 ng/mL

Range: 0.16-10 ng/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Frankel, D.S. *et al.* (2009) Resistin, adiponectin, and risk of heart failure: the Framingham offspring study. *J. Am. Coll. Cardiol.* **53**:275.

Sample(s) Tested: human plasma.

Hu, W.L. *et al.* (2007) Decreased C-reactive protein-induced resistin production in human monocytes by simvastatin. *Cytokine* **40**:201.

Sample(s) Tested: human peripheral blood mononuclear cell culture supernate.

Golledge, J. *et al.* (2007) Obesity, adipokines, and abdominal aortic aneurysm: Health in Men study. *Circulation* **116**:2275.

Sample(s) Tested: human serum.

Ruano, J. *et al.* (2007) Intake of phenol-rich virgin olive oil improves the postprandial prothrombotic profile in hypercholesterolemic patients. *Am. J. Clin. Nutr.* **86**:341.

Sample(s) Tested: human plasma.

Farese, R.V. *et al.* (2007) Muscle-specific knockout of PKC- λ impairs glucose transport and induces metabolic and diabetic syndromes. *J. Clin. Invest.* **117**:2289.

Sample(s) Tested: human serum.

Quantikine Mouse Resistin ELISACatalog # **MRSN00**

Sensitivity: 8 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Kanda, T. *et al.* (2009) PPAR γ in the endothelium regulates metabolic responses to high-fat diet in mice. *J. Clin. Invest.* **119**:110.

Sample(s) Tested: mouse serum.

Pini, M. *et al.* (2008) Role and regulation of adipokines during zymosan-induced peritoneal inflammation in mice. *Endocrinology* **149**:4080.

Sample(s) Tested: mouse serum.

Kajimura, S. *et al.* (2008) Regulation of the brown and white fat gene programs through a PRDM16/CtBP transcriptional complex. *Genes Dev.* **22**:1397.

Sample(s) Tested: 3T3-L1 mouse embryonic fibroblast-derived adipocyte cell culture supernate.

Lee, M.J. *et al.* (2008) Octylphenol stimulates resistin gene expression in 3T3-L1 adipocytes via the estrogen receptor and extracellular signal-regulated kinase pathways. *Am. J. Physiol. Cell Physiol.* **294**:C1542.

Sample(s) Tested: mouse serum.

Kuo, L.E. *et al.* (2007) Neuropeptide Y acts directly in the periphery on fat tissue and mediates stress-induced obesity and metabolic syndrome. *Nat. Med.* **13**:803.

Sample(s) Tested: mouse plasma (EDTA and heparin), mouse preadipocyte cell culture supernate.

SCF/c-kit Ligand**Quantikine Human SCF/c-kit Ligand ELISA**Catalog # **DCK00**

Sensitivity: 9 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Westerweel, P.E. *et al.* (2008) Endothelial progenitor cell levels in obese men with the metabolic syndrome and the effect of simvastatin monotherapy vs. simvastatin/ezetimibe combination therapy. *Eur. Heart J.* **29**:2808.

Sample(s) Tested: human serum.

Han, Z.B. *et al.* (2008) Hypoxia-inducible factor (HIF)-1 α directly enhances the transcriptional activity of stem cell factor (SCF) in response to hypoxia and epidermal growth factor (EGF). *Carcinogenesis* **29**:1853.

Sample(s) Tested: MCF-7 human breast cancer cell culture supernate.

Hollins, F. *et al.* (2008) Human airway smooth muscle promotes human lung mast cell survival, proliferation, and constitutive activation: cooperative roles for CADM1, stem cell factor, and IL-6. *J. Immunol.* **181**:2772.

Sample(s) Tested: human lung mast cell culture supernate.

Smalley, K.S. *et al.* (2008) Identification of a novel subgroup of melanomas with KIT/cyclin-dependent kinase-4 overexpression. *Cancer Res.* **68**:5743.

Sample(s) Tested: human melanoma cell culture supernate.



Makowska, J.S. *et al.* (2007) Systemic responses after bronchial aspirin challenge in sensitive patients with asthma. *J. Allergy Clin. Immunol.* **121**:348.

Sample(s) Tested: human serum.

Quantikine Mouse SCF/c-kit Ligand ELISA

Catalog # **MCK00**

Sensitivity: 5 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Higuchi, K. *et al.* (2009) Direct injection of kit ligand-2 lentivirus improves cardiac repair and rescues mice post-myocardial infarction. *Mol. Ther.* **17**:262.

Sample(s) Tested: homogenized mouse heart tissue, SI/SI4 mouse fetal liver stromal fibroblast cell culture supernate.

Huang, B. *et al.* (2008) SCF-mediated mast cell infiltration and activation exacerbate the inflammation and immunosuppression in tumor microenvironment. *Blood* **112**:1269.

Sample(s) Tested: mouse tumor cell culture supernate.

Zhang, P. *et al.* (2008) The lineage-c-Kit⁺Sca-1⁺ cell response to *Escherichia coli* bacteremia in Balb/c mice. *Stem Cells* **26**:1778.

Sample(s) Tested: mouse plasma (heparin).

Ebos, J.M. *et al.* (2007) Multiple circulating proangiogenic factors induced by sunitinib malate are tumor-independent and correlate with antitumor efficacy. *Proc. Natl. Acad. Sci. U.S.A.* **104**:17069.

Sample(s) Tested: mouse plasma.

Kan, C.D. *et al.* (2007) Recipient age determines the cardiac functional improvement achieved by skeletal myoblast transplantation. *J. Am. Coll. Cardiol.* **50**:1086.

Sample(s) Tested: homogenized rat heart tissue.

SCF R/c-kit

Quantikine Human Soluble SCF R/c-kit ELISA

Catalog # **DSCR00**

Sensitivity: 0.339 ng/mL

Range: 0.78-50 ng/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Westerweel, P.E. *et al.* (2008) Endothelial progenitor cell levels in obese men with the metabolic syndrome and the effect of simvastatin monotherapy vs. simvastatin/ezetimibe combination therapy. *Eur. Heart J.* **29**:2808.

Sample(s) Tested: human serum.

Saltz, L.B. *et al.* (2007) Phase II trial of sunitinib in patients with metastatic colorectal cancer after failure of standard therapy. *J. Clin. Oncol.* **25**:4793.

Sample(s) Tested: human plasma.

E-Selectin/CD62E

Quantikine Human Soluble E-Selectin/CD62E ELISA

Catalog # **DSLE00***

Sensitivity: 0.027 ng/mL

Range: 0.125-8 ng/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, heparin), serum.

Pinto, A. *et al.* (2009) Immuno-inflammatory predictors of stroke at follow-up in patients with chronic non-valvular atrial fibrillation (NVAf). *Clin. Sci.* **116**:781.

Sample(s) Tested: human plasma (citrate).

Yeo, T.W. *et al.* (2008) Angiotensin-2 is associated with decreased endothelial nitric oxide and poor clinical outcome in severe falciparum malaria. *Proc. Natl. Acad. Sci. U.S.A.* **105**:17097.

Sample(s) Tested: human plasma.

Khanolkar, M.P. *et al.* (2007) Rosiglitazone produces a greater reduction in circulating platelet activity compared with gliclazide in patients with type 2 diabetes mellitus--an effect probably mediated by direct platelet PPAR γ activation. *Atherosclerosis* **197**:718.

Sample(s) Tested: human serum.

Quantikine Mouse Soluble E-Selectin/CD62E ELISA

Catalog # **MES00**

Sensitivity: 4.7 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Kahn, P. *et al.* (2008) Prevention of murine antiphospholipid syndrome by BAFF blockade. *Arthritis Rheum.* **58**:2824.

Sample(s) Tested: mouse serum.

Chiang, L.Y. *et al.* (2008) *Aspergillus fumigatus* stimulates leukocyte adhesion molecules and cytokine production by endothelial cells *in vitro* and during invasive pulmonary disease. *Infect. Immun.* **76**:3429.

Sample(s) Tested: homogenized mouse lung tissue.

Westerterp, M. *et al.* (2007) Apolipoprotein C-I is crucially involved in lipopolysaccharide-induced atherosclerosis development in apolipoprotein E-knockout mice. *Circulation* **116**:2173.

Sample(s) Tested: mouse plasma.

Zhang, H. *et al.* (2007) Endogenous hydrogen sulfide regulates leukocyte trafficking in cecal ligation and puncture-induced sepsis. *J. Leukoc. Biol.* **82**:894.

Sample(s) Tested: homogenized mouse lung and liver tissue.

Nakamura, M. *et al.* (2007) Toll-like receptor 4 signal transduction inhibitor, M62812, suppresses endothelial cell and leukocyte activation and prevents lethal septic shock in mice. *Eur. J. Pharmacol.* **569**:237.

Sample(s) Tested: mouse plasma (citrate).

L-Selectin/CD62L

Human Soluble L-Selectin/CD62L ELISA

Catalog # **BBE4B***

Sensitivity: 0.3 ng/mL

Range: 0.99-57 ng/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Paris, D.H. *et al.* (2008) Differential patterns of endothelial and leucocyte activation in 'typhus-like' illnesses in Laos and Thailand. *Clin. Exp. Immunol.* **153**:63.

Sample(s) Tested: human serum.

Schmiedel, O. *et al.* (2007) Microalbuminuria in Type 2 diabetes indicates impaired microvascular vasomotion and perfusion. *Am. J. Physiol. Heart Circ. Physiol.* **293**:H3424.

Sample(s) Tested: human plasma.

Orr, Y. *et al.* (2007) Conformational activation of CD11b without shedding of L-selectin on circulating human neutrophils. *J. Leukoc. Biol.* **82**:1115.

Sample(s) Tested: human plasma (EDTA).

Gómez-Gavero, M. *et al.* (2007) Expression and regulation of the metalloproteinase ADAM-8 during human neutrophil pathophysiological activation and its catalytic activity on L-selectin shedding. *J. Immunol.* **178**:8053.

Sample(s) Tested: CEM human T cell acute lymphocytic leukemia cell culture supernate.

Touat, Z. *et al.* (2006) Renewal of mural thrombus releases plasma markers and is involved in aortic abdominal aneurysm evolution. *Am. J. Pathol.* **168**:1022.

Sample(s) Tested: human plasma, human thrombi explant cell culture supernate.

Quantikine Mouse Soluble L-Selectin/CD62L ELISA

Catalog # **MLS00**

Sensitivity: 0.034 ng/mL

Range: 0.62-40 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Leoni, G. *et al.* (2008) Inflamed phenotype of the mesenteric microcirculation of melanocortin type 3 receptor-null mice after ischemia-reperfusion. *FASEB J.* **22**:4228.

Sample(s) Tested: mouse plasma (heparin).

Paul, R. *et al.* (2008) Myeloid Src kinases regulate phagocytosis and oxidative burst in pneumococcal meningitis by activating NADPH oxidase. *J. Leukoc. Biol.* **84**:1141.

Sample(s) Tested: homogenized mouse brain tissue.

Ahrens, I. *et al.* (2008) Selenium supplementation induces metalloproteinase-dependent L-selectin shedding from monocytes. *J. Leukoc. Biol.* **83**:1388.

Sample(s) Tested: mouse serum.

Madan, M. *et al.* (2007) Atheroprotective role of interleukin-6 in diet- and/or pathogen-associated atherosclerosis using an ApoE heterozygote murine model. *Atherosclerosis* **197**:504.

Sample(s) Tested: mouse serum.

Li, Y. *et al.* (2006) ADAM17 deficiency by mature neutrophils has differential effects on L-selectin shedding. *Blood* **108**:2275.

Sample(s) Tested: mouse plasma, mouse neutrophil cell culture supernate.

P-Selectin/CD62P

Human Soluble P-Selectin/CD62P ELISA

Catalog # **BBE6***

Sensitivity: 0.5 ng/mL

Range: 0.82-45 ng/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Pinto, A. *et al.* (2009) Immuno-inflammatory predictors of stroke at follow-up in patients with chronic non-valvular atrial fibrillation (NVAf). *Clin. Sci.* **116**:781.

Sample(s) Tested: human plasma (citrate).

Ay, C. *et al.* (2008) High plasma levels of soluble P-selectin are predictive of venous thromboembolism in cancer patients: results from the Vienna Cancer and Thrombosis Study (CATS). *Blood* **112**:2703.

Sample(s) Tested: human plasma (citrate).

Choudhury, A. *et al.* (2008) Soluble CD40 ligand, platelet surface CD40 ligand, and total platelet CD40 ligand in atrial fibrillation: relationship to soluble P-selectin, stroke risk factors, and risk factor intervention. *Chest* **134**:574.

Sample(s) Tested: platelet-poor plasma (citrate).

Klings, E.S. *et al.* (2008) Pulmonary arterial hypertension and left-sided heart disease in sickle cell disease: clinical characteristics and association with soluble adhesion molecule expression. *Am. J. Hematol.* **83**:547.

Sample(s) Tested: human plasma (heparin).

Reiner, A.P. *et al.* (2008) Soluble P-selectin, SELP polymorphisms, and atherosclerotic risk in European-American and African-American young adults: the Coronary Artery Risk Development in Young Adults (CARDIA) Study. *Arterioscler. Thromb. Vasc. Biol.* **28**:1549.

Sample(s) Tested: human plasma.

Quantikine Mouse Soluble P-Selectin/CD62P ELISA

Catalog # **MPS00**

Sensitivity: 0.018 ng/mL

Range: 0.31-20 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Stone, D. *et al.* (2008) Biodistribution and safety profile of recombinant adeno-associated virus serotype 6 vectors following intravenous delivery. *J. Virol.* **82**:7711.

Sample(s) Tested: mouse serum, mouse plasma (citrate).

Kirkeby, A. *et al.* (2008) High-dose erythropoietin alters platelet reactivity and bleeding time in rodents in contrast to the neuroprotective variant carbamyl-erythropoietin (CEPO). *Thromb. Haemost.* **99**:720.

Sample(s) Tested: mouse plasma.

Tikellis, C. *et al.* (2008) Reduced plaque formation induced by rosiglitazone in an STZ-diabetes mouse model of atherosclerosis is associated with downregulation of adhesion molecules. *Atherosclerosis* **199**:55.

Sample(s) Tested: mouse plasma (citrate).

Hu, W. *et al.* (2007) Rapid conditional targeted ablation of cells expressing human CD59 in transgenic mice by intermedilysin. *Nat. Med.* **14**:98.

Sample(s) Tested: mouse plasma (EDTA).



Serpin E1/PAI-1

Quantikine Human Serpin E1/PAI-1 ELISA

Catalog # **DSE100**

Sensitivity: 0.142 ng/mL

Range: 0.312-20 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, cell lysate, plasma (citrate, CTAD, EDTA, heparin).

Tkachuk, N. *et al.* (2008) Urokinase induces survival or pro-apoptotic signals in human mesangial cells depending on the apoptotic stimulus. *Biochem. J.* **415**:265.

Sample(s) Tested: human mesangial cell culture supernate.

Sharma, K. *et al.* (2008) Adiponectin regulates albuminuria and podocyte function in mice. *J. Clin. Invest.* **118**:1645.

Sample(s) Tested: human plasma.

SLPI

Quantikine Human SLPI ELISA

Catalog # **DPI00**

Sensitivity: 25 pg/mL

Range: 62.5-4000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.

Fakioglu, E. *et al.* (2008) Herpes simplex virus downregulates secretory leukocyte protease inhibitor: a novel immune evasion mechanism. *J. Virol.* **82**:9337.

Sample(s) Tested: CaSki human cervical cancer cell culture supernate.

Cheng, W.L. *et al.* (2008) Overexpression of a secretory leukocyte protease inhibitor in human gastric cancer. *Int. J. Cancer* **123**:1787.

Sample(s) Tested: human plasma.

Fahey, J.V. *et al.* (2008) Estradiol selectively regulates innate immune function by polarized human uterine epithelial cells in culture. *Cell Stem Cell* **1**:317.

Sample(s) Tested: human uterine epithelial cell culture supernate.

Mitchell, C.M. *et al.* (2008) Bacterial vaginosis, not HIV, is primarily responsible for increased vaginal concentrations of proinflammatory cytokines. *AIDS Res. Hum. Retroviruses* **24**:667.

Sample(s) Tested: human vaginal fluid.

Jacobsen, L.C. *et al.* (2008) The secretory leukocyte protease inhibitor (SLPI) and the secondary granule protein lactoferrin are synthesized in myelocytes, colocalize in subcellular fractions of neutrophils, and are coreleased by activated neutrophils. *J. Leukoc. Biol.* **83**:1155.

Sample(s) Tested: human neutrophil cell lysate.

ST2/IL-1 R4

Quantikine Human ST2/IL-1 R4 ELISA

Catalog # **DST200**

Sensitivity: 13.5 pg/mL

Range: 31.3-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

STAT2

Cell-Based ELISA Human Phospho-STAT2 (Y689)

Catalog # **KCB2890**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.

STAT3

Cell-Based ELISA Human/Mouse Phospho-STAT3 (Y705)

Catalog # **KCB4607**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.

STAT4

Cell-Based ELISA Human Phospho-STAT4 (Y693)

Catalog # **KCB4319**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.

STAT5

Cell-Based ELISA Human/Mouse Phospho-STAT5 (Y699)

Catalog # **KCB4190**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.

STAT6

Cell-Based ELISA Human/Mouse Phospho-STAT6 (Y641)

Catalog # **KCB3717**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.

Substance P

Parameter Multispecies Substance P Assay

Catalog # **KGE007***

Sensitivity: 43.8 pg/mL

Range: 39-2500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (heparin), saliva, serum, urine.

Templeton, A. *et al.* (2008) Chemical sympathectomy increases susceptibility to ocular herpes simplex virus type 1 infection. *J. Neuroimmunol.* **197**:37.

Sample(s) Tested: homogenized mouse trigeminal ganglia tissue.

Im, H.J. *et al.* (2008) Basic fibroblast growth factor accelerates matrix degradation via a neuro-endocrine pathway in human adult articular chondrocytes. *J. Cell. Physiol.* **215**:452.

Sample(s) Tested: human synovial fluid.

Substance P continued

Dansereau, M.A. *et al.* (2008) Spinal CCL2 pronociceptive action is no longer effective in CCR2 receptor antagonist-treated rats. *J. Neurochem.* **106**:757.

Sample(s) Tested: rat dorsal horn spinal cord cell lysate.

Shigematsu, N. *et al.* (2008) Association of cathepsin E deficiency with the increased territorial aggressive response of mice. *J. Neurochem.* **105**:1394.

Sample(s) Tested: homogenized mouse brain tissue.

Tessier, J. *et al.* (2007) Contributions of histamine, prostanoids, and neurokinins to edema elicited by edema toxin from *Bacillus anthracis*. *Infect. Immun.* **75**:1895.

Sample(s) Tested: NT2N human teratocarcinoma cell culture supernate.

Survivin**Quantikine Human Survivin ELISA**Catalog # **DSV00**

Sensitivity: 9.96 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

Khan, S. *et al.* (2009) Extracellular, cell-permeable survivin inhibits apoptosis while promoting proliferative and metastatic potential. *Br. J. Cancer* **100**:1073.

Sample(s) Tested: HeLa human cervical epithelial carcinoma cell culture supernate.

Surveyor IC Human Total Survivin ELISACatalog # **SUV647**

Range: 62.5-4000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell lysate.

Testosterone**Parameter Multi-species Testosterone Assay**Catalog # **KGE010***

Sensitivity: 0.041 ng/mL

Range: 0.041-10 ng/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

TfR/Transferrin R**Quantikine IVD Human Soluble TfR ELISA**Catalog # **DTFR1**

Sensitivity: 0.5 nmol/L

Range: 3-80 nmol/L

Sample Volume: 20 µL

Validated Sample Type(s): plasma (citrate, EDTA, heparin), serum.

Sun, Q. *et al.* (2008) Excessive body iron stores are not associated with risk of coronary heart disease in women. *J. Nutr.* **138**:2436.

Sample(s) Tested: human plasma.

Forni, G.L. *et al.* (2008) Acquired iron overload associated with antitransferrin monoclonal immunoglobulin: a case report. *Am. J. Hematol.* **83**:932.

Sample(s) Tested: human serum.

Atkinson, S.H. *et al.* (2008) Tumor necrosis factor SNP haplotypes are associated with iron deficiency anemia in West African children. *Blood* **112**:4276.

Sample(s) Tested: human plasma.

Ma, A.G. *et al.* (2008) Retinol and riboflavin supplementation decreases the prevalence of anemia in chinese pregnant women taking iron and folic acid supplements. *J. Nutr.* **138**:1946.

Sample(s) Tested: human plasma.

Zoi, K. *et al.* (2008) Increased CD177 (PRV1) expression in thalassaemia and the underlying erythropoietic activity. *Br. J. Haematol.* **141**:100.

Sample(s) Tested: human serum.

TFPI**Quantikine Human TFPI ELISA**Catalog # **DTFP10**

Sensitivity: 6.7 pg/mL

Range: 31.2-2000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), urine.

TGF-α**Quantikine Human TGF-α ELISA**Catalog # **DTGA00**

Sensitivity: 7.1 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), serum.

Han, S.W. *et al.* (2009) Phase II study and biomarker analysis of cetuximab combined with modified FOLFOX6 in advanced gastric cancer. *Br. J. Cancer* **100**:298.

Sample(s) Tested: human serum.

García, B. *et al.* (2008) Effective inhibition of the epidermal growth factor/epidermal growth factor receptor binding by anti-epidermal growth factor antibodies is related to better survival in advanced non-small-cell lung cancer patients treated with the epidermal growth factor cancer vaccine. *Clin. Cancer Res.* **14**:840.

Sample(s) Tested: human serum.

Bergin, D.A. *et al.* (2008) Activation of the epidermal growth factor receptor (EGFR) by a novel metalloprotease pathway. *J. Biol. Chem.* **283**:31736.

Sample(s) Tested: 16HBE140 human bronchial epithelial cell culture supernate.

Sasaki, T. *et al.* (2008) Modification of the primary tumor microenvironment by transforming growth factor-α-epidermal growth factor receptor signaling promotes metastasis in an orthotopic colon cancer model. *Am. J. Pathol.* **173**:205.

Sample(s) Tested: KM12 human colon cancer cell culture supernate.

Lemos-González, Y. *et al.* (2007) Alteration of the serum levels of the epidermal growth factor receptor and its ligands in patients with non-small cell lung cancer and head and neck carcinoma. *Br. J. Cancer* **96**:1569.

Sample(s) Tested: human serum.



TGF- β 1

Quantikine Human TGF- β 1 ELISA

Catalog # **DB100B***

Sensitivity: 15.4 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA), serum, urine.

Chaput, N. *et al.* (2009) Identification of CD8⁺CD25⁺Foxp3⁺ suppressive T cells in colorectal cancer tissue. *Gut* **58**:520.

Sample(s) Tested: homogenized human colon tissue.

Oh, J.Y. *et al.* (2009) Cytokine secretion by human mesenchymal stem cells cocultured with damaged corneal epithelial cells. *Cytokine* **46**:100.

Sample(s) Tested: human peripheral blood mononuclear cell, mesenchymal stem cell, and corneal epithelial cell culture supernates.

Attur, M.G. *et al.* (2009) F-spondin, a neuroregulatory protein, is up-regulated in osteoarthritis and regulates cartilage metabolism via TGF- β activation. *FASEB J.* **23**:79.

Sample(s) Tested: human cartilage expansion and TMLC mink lung epithelial cell culture supernates.

Chase, J.C. *et al.* (2009) Direct and indirect impairment of human dendritic cell function by virulent *Francisella tularensis* Schu S4. *Infect. Immun.* **77**:180.

Sample(s) Tested: human dendritic cell culture supernate.

Wang, J. *et al.* (2008) Deep dermal fibroblasts contribute to hypertrophic scarring. *Lab. Invest.* **88**:1278.

Sample(s) Tested: homogenized human wound tissue.

Quantikine Mouse/Rat/Porcine/Canine TGF- β 1 ELISA

Catalog # **MB100B***

Sensitivity: 15.4 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Nicola, T. *et al.* (2009) Loss of Thy-1 inhibits alveolar development in the newborn mouse lung. *Am. J. Physiol. Lung Cell Mol. Physiol.* **296**:L738.

Sample(s) Tested: homogenized mouse lung tissue.

Siegemund, S. *et al.* (2009) Differential IL-23 requirement for IL-22 and IL-17A production during innate immunity against *Salmonella enterica* serovar Enteritidis. *Int. Immunol.* **21**:555.

Sample(s) Tested: mouse serum, mouse peritoneal lavage.

Bhowmick, S. *et al.* (2009) Vaccination route that induces transforming growth factor- β production fails to elicit protective immunity against *Leishmania donovani* infection. *Infect. Immun.* **77**:1514.

Sample(s) Tested: mouse splenocyte cell culture supernate.

Ryman-Rasmussen, J.P. *et al.* (2009) Inhaled multiwalled carbon nanotubes potentiate airway fibrosis in murine allergic asthma. *Am. J. Respir. Cell Mol. Biol.* **40**:349.

Sample(s) Tested: mouse BALF.

Li, H. *et al.* (2009) Intravenous tolerance modulates macrophage classical activation and antigen presentation in experimental autoimmune encephalomyelitis. *J. Neuroimmunol.* **208**:54.

Sample(s) Tested: mouse monocyte/T cell co-culture supernate.

TGF- β 2

Quantikine Human TGF- β 2 ELISA

Catalog # **DB250***

Sensitivity: 7 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Kawahara, S. *et al.* (2008) Potent inhibition of cicatricial contraction in proliferative vitreoretinal diseases by statins. *Diabetes* **57**:2784.

Sample(s) Tested: human vitreous humor.

Woodman, L. *et al.* (2008) Mast cells promote airway smooth muscle cell differentiation via autocrine up-regulation of TGF- β 1. *J. Immunol.* **181**:5001.

Sample(s) Tested: human smooth muscle/lung mast cell co-culture supernate.

He, S. *et al.* (2008) Connective tissue growth factor as a mediator of intraocular fibrosis. *Invest. Ophthalmol. Vis. Sci.* **49**:4078.

Sample(s) Tested: human retinal pigment epithelial cell culture supernate.

Nakano, Y. *et al.* (2008) Connexin43 knockdown accelerates wound healing but inhibits mesenchymal transition after corneal endothelial injury *in vivo*. *Invest. Ophthalmol. Vis. Sci.* **49**:93.

Sample(s) Tested: rat aqueous humor.

Hinz, S. *et al.* (2007) Foxp3 expression in pancreatic carcinoma cells as a novel mechanism of immune evasion in cancer. *Cancer Res.* **67**:8344.

Sample(s) Tested: panc1, panc89, CAPAN-1, and Colo357 human pancreatic cancer cell culture supernates.

Thrombomodulin/CD141

Quantikine Human Thrombomodulin ELISA

Catalog # **DTHBDO**

Sensitivity: 27 pg/mL
Range: 62.5-4000 pg/mL
Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, cell lysate, plasma (citrate, EDTA, heparin), serum, urine.

Thrombopoietin/Tpo

Quantikine Human Tpo ELISA

Catalog # **DTP00B**

Sensitivity: 18.5 pg/mL
Range: 31.2-2000 pg/mL
Sample Volume: 200 μ L

Validated Sample Type(s): cell culture supernate, platelet-poor plasma (EDTA, heparin), serum.

El-Harith, el-H.A. *et al.* (2009) Familial thrombocytosis caused by the novel germ-line mutation p.Pro106Leu in the MPL gene. *Br. J. Haematol.* **144**:185.

Sample(s) Tested: human plasma.

Asahi, A. *et al.* (2008) *Helicobacter pylori* eradication shifts monocyte Fc γ receptor balance toward inhibitory Fc γ RIIB in immune thrombocytopenic purpura patients. *J. Clin. Invest.* **118**:2939.

Sample(s) Tested: human plasma.

Thrombopoietin/Tpo continued

Higgs, J.R. *et al.* (2008) Familial essential thrombocythemia with spontaneous megakaryocyte colony formation and acquired JAK2 mutations. *Leukemia* **22**:1551.
Sample(s) Tested: human serum.

Liem-Moolenaar, M. *et al.* (2008) Pharmacodynamics and pharmacokinetics of the novel thrombopoietin mimetic peptide RWJ-800088 in humans. *Clin. Pharmacol. Ther.* **84**:481.
Sample(s) Tested: human plasma.

Molica, S. *et al.* (2008) Serum thrombopoietin compared with ZAP-70 and immunoglobulin heavy-chain gene mutation status as a predictor of time to first treatment in early chronic lymphocytic leukemia. *Leuk. Lymphoma* **49**:62.
Sample(s) Tested: human serum.

Quantikine Mouse Tpo ELISACatalog # **MTP00**

Sensitivity: 20 pg/mL

Range: 62.5–4000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA), serum.

Eckly, A. *et al.* (2009) Abnormal megakaryocyte morphology and proplatelet formation in mice with megakaryocyte-restricted MYH9 inactivation. *Blood* **113**:3182.
Sample(s) Tested: mouse plasma (EDTA).

Cheng, E.C. *et al.* (2009) Role for MKL1 in megakaryocytic maturation. *Blood* **113**:2826.
Sample(s) Tested: mouse serum.

Lannutti, B.J. *et al.* (2009) Incomplete restoration of Mpl expression in the *mpl^{+/−}* mouse produces partial correction of the stem cell-repopulating defect and paradoxical thrombocytosis. *Blood* **113**:1778.
Sample(s) Tested: mouse plasma.

Zhang, P. *et al.* (2008) The lineage-*c-Kit⁺Sca-1⁺* cell response to *Escherichia coli* bacteremia in Balb/c mice. *Stem Cells* **26**:1778.
Sample(s) Tested: mouse plasma (heparin).

Xing, S. *et al.* (2008) Transgenic expression of JAK2V617F causes myeloproliferative disorders in mice. *Blood* **111**:5109.
Sample(s) Tested: mouse plasma (EDTA).

Thrombospondin-1**Quantikine Human Thrombospondin-1 ELISA**Catalog # **DTSP10**

Sensitivity: 0.944 ng/mL

Range: 7.81–500 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), saliva, serum.

Oh, J.Y. *et al.* (2009) Cytokine secretion by human mesenchymal stem cells cocultured with damaged corneal epithelial cells. *Cytokine* **46**:100.

Sample(s) Tested: human corneal epithelial cell, mesenchymal stem cell, and peripheral blood mononuclear cell culture supernates.

Thrombospondin-2**Quantikine Human Thrombospondin-2 ELISA**Catalog # **DTSP20**

Sensitivity: 0.068 ng/mL

Range: 0.31–20 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), serum.

Tie-1**Quantikine Human Tie-1 ELISA**Catalog # **DTE100**

Sensitivity: 0.21 ng/mL

Range: 0.156–10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, cell lysates, plasma (EDTA, heparin), serum.

Tie-2**Quantikine Human Tie-2 ELISA**Catalog # **DTE200**

Sensitivity: 0.066 ng/mL

Range: 0.156–10 ng/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Cai, J. *et al.* (2008) The angiopoietin/Tie-2 system regulates pericyte survival and recruitment in diabetic retinopathy. *Invest. Ophthalmol. Vis. Sci.* **49**:2163.
Sample(s) Tested: bovine pericyte cell lysates.

Lee, C.Y. *et al.* (2007) Marrow angiogenesis-associated factors as prognostic biomarkers in patients with acute myelogenous leukemia. *Br. J. Cancer* **97**:877.
Sample(s) Tested: human plasma.

Caine, G.J. *et al.* (2007) Changes in plasma vascular endothelial growth factor, angiopoietins, and their receptors following surgery for breast cancer. *Cancer Lett.* **248**:131.

Sample(s) Tested: human plasma (citrate).

Cell-Based ELISA Human Phospho-Tie-2 (Y992)Catalog # **KCB2720**

Sample Volume: 100 µL

Validated Sample Type(s): whole cells.

Quantikine Mouse Tie-2 ELISACatalog # **MTE200**

Sensitivity: 40.2 pg/mL

Range: 125–8000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenate.

Ebos, J.M. *et al.* (2007) Multiple circulating proangiogenic factors induced by sunitinib malate are tumor-independent and correlate with antitumor efficacy. *Proc. Natl. Acad. Sci. U.S.A.* **104**:17069.

Sample(s) Tested: mouse plasma.



Santel, A. *et al.* (2006) A novel siRNA-lipoplex technology for RNA interference in the mouse vascular endothelium. *Gene Ther.* **13**:1222.

Sample(s) Tested: mouse serum.

TIM-1/KIM-1/HAVCR

Quantikine Human TIM-1/KIM-1/HAVCR ELISA

Catalog # **DKM100**

Sensitivity: .046 ng/mL

Range: .156-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): urine.

Quantikine Rat TIM-1/KIM-1/HAVCR ELISA

Catalog # **RKM100**

Sensitivity: 2.74 pg/mL

Range: 7.81-500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenates, urine.

TIMP-1

Quantikine Human TIMP-1 ELISA

Catalog # **DTM100***

Sensitivity: 0.08 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.

Kapsoritakis, A.N. *et al.* (2008) Imbalance of tissue inhibitors of metalloproteinases (TIMP) - 1 and - 4 serum levels, in patients with inflammatory bowel disease. *Cell Stem Cell* **8**:55.

Sample(s) Tested: human serum.

Castellano, G. *et al.* (2008) Activation of the osteopontin/matrix metalloproteinase-9 pathway correlates with prostate cancer progression. *Clin. Cancer Res.* **14**:7470.

Sample(s) Tested: human plasma (heparin).

Glader, P. *et al.* (2008) Impact of acute exposure to tobacco smoke on gelatinases in the bronchoalveolar space. *Eur. Respir. J.* **32**:644.

Sample(s) Tested: human BALF.

Kosmala, W. *et al.* (2008) Matrix metalloproteinases 2 and 9 and their tissue inhibitors 1 and 2 in premenopausal obese women: relationship to cardiac function. *Cell Stem Cell* **32**:763.

Sample(s) Tested: human plasma.

Li, J. *et al.* (2007) Suppressive effects of leflunomide on leptin-induced TIMP-1 production involves on hepatic stellate cell proliferation and apoptosis. *Eur. J. Pharmacol.* **580**:63.

Sample(s) Tested: human hematopoietic stem cell culture supernate.

Quantikine Mouse TIMP-1 ELISA

Catalog # **MTM100**

Sensitivity: 3.5 pg/mL

Range: 37.5-2400 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Morschl, E. *et al.* (2008) A3 adenosine receptor signaling influences pulmonary inflammation and fibrosis. *Am. J. Respir. Cell Mol. Biol.* **39**:697.

Sample(s) Tested: mouse BALF.

Lackey, D.E. *et al.* (2008) Retinoic acid decreases adherence of murine myeloid dendritic cells and increases production of matrix metalloproteinase-9. *J. Nutr.* **138**:1512.

Sample(s) Tested: mouse dendritic cell culture supernate.

Crocker, S.J. *et al.* (2007) Amelioration of coxsackievirus B3-mediated myocarditis by inhibition of tissue inhibitors of matrix metalloproteinase-1. *Am. J. Pathol.* **171**:1762.

Sample(s) Tested: homogenized mouse heart tissue.

Cho, J.Y. *et al.* (2006) Remodeling associated expression of matrix metalloproteinase 9 but not tissue inhibitor of metalloproteinase 1 in airway epithelium: modulation by immunostimulatory DNA. *J. Allergy Clin. Immunol.* **117**:618.

Sample(s) Tested: homogenized mouse lung tissue.

Hu, Q.W. and G.T. Liu (2006) Effects of bicyclol on dimethylnitrosamine-induced liver fibrosis in mice and its mechanism of action. *Life Sci.* **79**:606.

Sample(s) Tested: mouse serum, homogenized mouse liver tissue.

Quantikine Rat TIMP-1 ELISA

Catalog # **RTM100***

Sensitivity: 4.5 pg/mL

Range: 37.5-2400 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Akool, el-S. *et al.* (2005) Nitric oxide induces TIMP-1 expression by activating the transforming growth factor-β-Smad signaling pathway. *J. Biol. Chem.* **280**:39403.

Sample(s) Tested: rat glomerular mesangial cell culture supernate.

TIMP-2

Quantikine Human TIMP-2 ELISA

Catalog # **DTM200**

Sensitivity: 0.064 ng/mL

Range: 0.156-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.

Kapsoritakis, A.N. *et al.* (2008) Imbalance of tissue inhibitors of metalloproteinases (TIMP) - 1 and - 4 serum levels, in patients with inflammatory bowel disease. *Cell Stem Cell* **8**:55.

Sample(s) Tested: human serum.

Glader, P. *et al.* (2008) Impact of acute exposure to tobacco smoke on gelatinases in the bronchoalveolar space. *Eur. Respir. J.* **32**:644.

Sample(s) Tested: human BALF.

Jones, J.A. *et al.* (2008) Matrix metalloproteinases and their inhibitors in the foreign body reaction on biomaterials. *J. Biomed. Mater. Res. A.* **84**:158.

Sample(s) Tested: human macrophage cell culture supernate.

Huh, J.W. *et al.* (2007) Is metalloproteinase-7 specific for idiopathic pulmonary fibrosis? *Chest* **133**:1101.

Sample(s) Tested: human BALF.

TIMP-4

Quantikine Human TIMP-4 ELISA

Catalog # **DTM400**

Sensitivity: 10 pg/mL

Range: 78.1-5000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), serum.

Kapsoritakis, A.N. *et al.* (2008) Imbalance of tissue inhibitors of metalloproteinases (TIMP) - 1 and - 4 serum levels, in patients with inflammatory bowel disease. *Cell Stem Cell* **8**:55.
Sample(s) Tested: human serum.

Webb, C.S. *et al.* (2006) Specific temporal profile of matrix metalloproteinase release occurs in patients after myocardial infarction: relation to left ventricular remodeling. *Circulation* **114**:1020.

Sample(s) Tested: human plasma.

TNF-α

Quantikine Canine TNF-α ELISA

Catalog # **CATA00**

Sensitivity: 4.2 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum, plasma (EDTA, heparin).

Xiong, W. *et al.* (2010) Human Flt3L generates dendritic cells from canine peripheral blood precursors: implications for a dog glioma clinical trial. *PLoS ONE* **5**:e11074.

Sample(s) Tested: canine peripheral blood dendritic cell culture supernate.

Quantikine Human TNF-α ELISA

Catalog # **DTA00C***

Sensitivity: 5.5 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 200 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Pinto, A. *et al.* (2009) Immuno-inflammatory predictors of stroke at follow-up in patients with chronic non-valvular atrial fibrillation (NVAf). *Clin. Sci.* **116**:781.

Sample(s) Tested: human plasma (citrate).

Eyerich, K. *et al.* (2009) IL-17 in atopic eczema: linking allergen-specific adaptive and microbial-triggered innate immune response. *J. Allergy Clin. Immunol.* **123**:59.

Sample(s) Tested: human T cell culture supernate.

Hartl, D. *et al.* (2008) Infiltrated neutrophils acquire novel chemokine receptor expression and chemokine responsiveness in chronic inflammatory lung diseases. *J. Immunol.* **181**:8053.

Sample(s) Tested: human BALF, human synovial fluid.

Huang, W.T. *et al.* (2008) Curcumin inhibits the increase of glutamate, hydroxyl radicals and PGE2 in the hypothalamus and reduces fever during LPS-induced systemic inflammation in rabbits. *Eur. J. Pharmacol.* **593**:105.

Sample(s) Tested: rabbit serum.

Aranha, C.C. *et al.* (2008) Assessment of cervicovaginal cytokine levels following exposure to microbicide Nisin gel in rabbits. *Cytokine* **43**:63.

Sample(s) Tested: rabbit cervicovaginal lavage, rabbit vaginal explant cell culture supernate.

Quantikine HS Human TNF-α ELISA

Catalog # **HSTA00D***

Sensitivity: 0.191 pg/mL

Range: 0.5-32 pg/mL

Sample Volume: 200 µL

Validated Sample Type(s): serum, plasma (citrate, EDTA, heparin).

Khosravi, R. *et al.* (2009) Adiposity and gingival crevicular fluid tumour necrosis factor-alpha levels in children. *J. Clin. Periodontol.* **36**:301.

Sample(s) Tested: human gingival crevicular fluid.

Frankel, D.S. *et al.* (2009) Resistin, adiponectin, and risk of heart failure the Framingham offspring study. *J. Am. Coll. Cardiol.* **53**:754.

Sample(s) Tested: human plasma.

Koutouzis, M. *et al.* (2009) Serum interleukin-6 is elevated in symptomatic carotid bifurcation disease. *Acta Neurol. Scand.* **119**:119.

Sample(s) Tested: human serum.

Ng, D.P. *et al.* (2008) Reduced GFR and albuminuria in Chinese type 2 diabetes mellitus patients are both independently associated with activation of the TNF-α system. *Diabetologia* **51**:2318.

Sample(s) Tested: human serum.

Hothersall, E.J. *et al.* (2008) Effects of atorvastatin added to inhaled corticosteroids on lung function and sputum cell counts in atopic asthma. *Thorax* **63**:1070.

Sample(s) Tested: human serum.

QuantiGlo Chemiluminescent Human TNF-α ELISA

Catalog # **QTA00B**

Sensitivity: 0.736 pg/mL

Range: 2.2-7000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum.

Challier, J.C. *et al.* (2008) Obesity in pregnancy stimulates macrophage accumulation and inflammation in the placenta. *Placenta* **29**:274.

Sample(s) Tested: human plasma.

Petersen, S.L. *et al.* (2007) Autocrine TNF-α signaling renders human cancer cells susceptible to Smac-mimetic-induced apoptosis. *Cancer Cell* **12**:445.

Sample(s) Tested: HCC44, HCC461, HCC827, and H2009 human lung cancer cell culture supernates.

Hu, P. *et al.* (2006) Autocrine tumor necrosis factor-α links endoplasmic reticulum stress to the membrane death receptor pathway through IRE1α-mediated NF-κB activation and down-regulation of TRAF2 expression. *Mol. Cell. Biol.* **26**:3071.

Sample(s) Tested: MCF-7 human breast cancer cell culture supernate.

Tsai, M.Y. *et al.* (2005) Effect of influenza vaccine on markers of inflammation and lipid profile. *J. Lab. Clin. Med.* **145**:323.

Sample(s) Tested: human plasma.

Quantikine Mouse TNF-α ELISA

Catalog # **MTA00***

Sensitivity: 5.1 pg/mL

Range: 23.4-1500 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, serum.

Earl, T.M. *et al.* (2009) Silencing of TLR4 decreases liver tumor burden in a murine model of colorectal metastasis and hepatic steatosis. *Ann. Surg. Oncol.* **16**:1043.

Sample(s) Tested: mouse serum, MC38 mouse colon cancer cell culture supernate and cell lysate, homogenized mouse liver tissue.



Caruso, R. *et al.* (2009) Inhibition of monocyte-derived inflammatory cytokines by IL-25 occurs via p38 Map kinase-dependent induction of Socs-3. *Blood* **113**:3512.

Sample(s) Tested: mouse serum.

Rosenberger, P. *et al.* (2009) Hypoxia-inducible factor-dependent induction of netrin-1 dampens inflammation caused by hypoxia. *Nat. Immunol.* **10**:195.

Sample(s) Tested: mouse serum.

Mayer, K. *et al.* (2009) Acute lung injury is reduced in fat-1 mice endogenously synthesizing n-3 fatty acids. *Am. J. Respir. Crit. Care Med.* **179**:474.

Sample(s) Tested: mouse BALF.

Pobezinskaya, Y.L. *et al.* (2008) The function of TRADD in signaling through tumor necrosis factor receptor 1 and TRIF-dependent Toll-like receptors. *Nat. Immunol.* **9**:1047.

Sample(s) Tested: mouse macrophage and embryonic fibroblast cell culture supernates.

Quantikine Porcine TNF- α ELISA

Catalog # **PTA00**

Sensitivity: 5 pg/mL

Range: 23.4-1500 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Wall, R. *et al.* (2009) Metabolic activity of the enteric microbiota influences the fatty acid composition of murine and porcine liver and adipose tissues. *Am. J. Clin. Nutr.* **89**:1393.

Sample(s) Tested: porcine lamina propria lymphocyte cell culture supernate.

Heinzel, F.R. *et al.* (2008) Inducible nitric oxide synthase expression and cardiomyocyte dysfunction during sustained moderate ischemia in pigs. *Circ. Res.* **103**:1120.

Sample(s) Tested: porcine cardiomyocyte cell lysate.

Sibila, O. *et al.* (2008) Effects of glucocorticoids in ventilated piglets with severe pneumonia. *Eur. Respir. J.* **32**:1037.

Sample(s) Tested: porcine serum, porcine BALF.

Shimoda, M. *et al.* (2008) Protective effect of Sivelestat in a porcine hepatectomy model prepared using an intermittent Pringle method. *Eur. J. Pharmacol.* **587**:248.

Sample(s) Tested: porcine serum.

Nold, M.F. *et al.* (2007) Activated protein C downregulates p38 mitogen-activated protein kinase and improves clinical parameters in an *in vivo* model of septic shock. *Thromb. Haemost.* **98**:1118.

Sample(s) Tested: porcine plasma.

Quantikine Rat TNF- α /TNFSF1A ELISA

Catalog # **RTA00***

Sensitivity: 5 pg/mL

Range: 12.5-800 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Mousavizadeh, K. *et al.* (2009) Anti-inflammatory effects of 5-HT receptor antagonist, tropisetron on experimental colitis in rats. *Eur. J. Clin. Invest.* **39**:375.

Sample(s) Tested: homogenized rat colon tissue.

Esposito, E. *et al.* (2009) Probiotics reduce the inflammatory response induced by a high-fat diet in the liver of young rats. *J. Nutr.* **139**:905.

Sample(s) Tested: homogenized rat liver tissue.

Chen, Y. *et al.* (2009) Protective effect of beraprost sodium, a stable prostacyclin analog, in the development of cigarette smoke extract-induced emphysema. *Am. J. Physiol. Lung Cell Mol. Physiol.* **296**:L648.

Sample(s) Tested: homogenized rat lung tissue.

Shyu, K.G. *et al.* (2009) Hyperbaric oxygen activates discoidin domain receptor 2 via tumour necrosis factor- α and the p38 MAPK pathway to increase vascular smooth muscle cell migration through matrix metalloproteinase-2. *Clin. Sci.* **116**:575.

Sample(s) Tested: rat vascular smooth muscle cell culture supernate.

Sun, J. *et al.* (2009) Effects of curcumin or dexamethasone on lung ischaemia-reperfusion injury in rats. *Eur. Respir. J.* **33**:398.

Sample(s) Tested: homogenized rat lung tissue, rat serum.

Quantikine Rhesus Macaque TNF- α ELISA

Catalog # **RHMTA0**

Sensitivity: 6.2 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

TNF RI/TNFRSF1A

Quantikine Human Soluble TNF RI/TNFRSF1A ELISA

Catalog # **DRT100***

Sensitivity: 1.2 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 200 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.

Vgontzas, A.N. *et al.* (2008) Selective effects of CPAP on sleep apnoea-associated manifestations. *Eur. J. Clin. Invest.* **38**:585.

Sample(s) Tested: human plasma (EDTA).

Choi, S.W. *et al.* (2008) Change in plasma tumor necrosis factor receptor 1 levels in the first week after myeloablative allogeneic transplantation correlates with severity and incidence of GVHD and survival. *Blood* **112**:1539.

Sample(s) Tested: human plasma.

Tellier, E. *et al.* (2008) HDLs activate ADAM17-dependent shedding. *J. Cell. Physiol.* **214**:687.

Sample(s) Tested: human TNF-RI transfected COS7 and H9C2 cell culture supernates.

Denollet, J. *et al.* (2008) Comparing Type D personality and older age as correlates of tumor necrosis factor- α dysregulation in chronic heart failure. *Brain Behav. Immun.* **22**:736.

Sample(s) Tested: human plasma (EDTA).

Hahalis, G. *et al.* (2007) Global vasomotor dysfunction and accelerated vascular aging in β -thalassemia major. *Atherosclerosis* **198**:448.

Sample(s) Tested: human serum.

Quantikine Mouse Soluble TNF RI/TNFRSF1A ELISA

Catalog # **MRT10**

Sensitivity: 5 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, serum.

Olleros, M.L. *et al.* (2008) Fat diet and alcohol-induced steatohepatitis after LPS challenge in mice: role of bioactive TNF and Th1 type cytokines. *Cytokine* **44**:118.

Sample(s) Tested: mouse serum.

TNF RI/TNFRSF1A continued

Voskas, D. *et al.* (2008) An eosinophil immune response characterizes the inflammatory skin disease observed in Tie-2 transgenic mice. *J. Leukoc. Biol.* **84**:59.

Sample(s) Tested: mouse serum.

Lahat, N. *et al.* (2008) Hypoxia enhances lysosomal TNF- α degradation in mouse peritoneal macrophages. *Am. J. Physiol. Cell Physiol.* **295**:C2.

Sample(s) Tested: RAW264.7 mouse macrophage cell culture supernate.

Defer, N. *et al.* (2007) TNFR1 and TNFR2 signaling interplay in cardiac myocytes. *J. Biol. Chem.* **282**:35564.

Sample(s) Tested: homogenized rat heart tissue.

Faulkner, L. *et al.* (2007) Sexual dimorphism in superantigen shock involves elevated TNF- α and TNF- α induced hepatic apoptosis. *Am. J. Respir. Crit. Care Med.* **176**:473.

Sample(s) Tested: mouse serum.

TNF RII/TNFRSF1B**Quantikine Human Soluble TNF RII/TNFRSF1B ELISA**Catalog # **DRT200***

Sensitivity: 2.3 pg/mL

Range: 7.8-500 pg/mL

Sample Volume: 200 μ L

Validated Sample Type(s): cell culture supernate, plasma (citrate, EDTA, heparin), serum, urine.

Karlson, E.W. *et al.* (2009) Biomarkers of inflammation and development of rheumatoid arthritis in women from two prospective cohort studies. *Arthritis Rheum.* **60**:641.

Sample(s) Tested: human plasma (EDTA).

Master, S.L. *et al.* (2009) Neurobiological correlates of coping through emotional approach. *Brain Behav. Immun.* **23**:27.

Sample(s) Tested: human saliva.

Ng, D.P. *et al.* (2008) Reduced GFR and albuminuria in Chinese type 2 diabetes mellitus patients are both independently associated with activation of the TNF- α system. *Diabetologia* **51**:2318.

Sample(s) Tested: human serum.

Bäumel, M. *et al.* (2008) Enhanced susceptibility to Con A-induced liver injury in mice transgenic for the intracellular isoform of human TNF receptor type 2. *J. Leukoc. Biol.* **84**:162.

Sample(s) Tested: human serum.

Bouchama, A. *et al.* (2005) Experimental heatstroke in baboon: analysis of the systemic inflammatory response. *Shock* **24**:332.

Sample(s) Tested: baboon plasma (EDTA).

Quantikine Mouse Soluble TNF RII/TNFRSF1B ELISACatalog # **MRT20**

Sensitivity: 5 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Olleros, M.L. *et al.* (2008) Fat diet and alcohol-induced steatohepatitis after LPS challenge in mice: role of bioactive TNF and Th1 type cytokines. *Cytokine* **44**:118.

Sample(s) Tested: mouse serum.

Lahat, N. *et al.* (2008) Hypoxia enhances lysosomal TNF- α degradation in mouse peritoneal macrophages. *Am. J. Physiol. Cell Physiol.* **295**:C2.

Sample(s) Tested: RAW264.7 mouse macrophage cell culture supernate.

Gouze, E. *et al.* (2007) Transgene persistence and cell turnover in the diarthrodial joint: implications for gene therapy of chronic joint diseases. *Mol. Ther.* **15**:1114.

Sample(s) Tested: rat fibroblast cell culture supernate.

Wilson, M.R. *et al.* (2007) Differential roles of p53 and p75 tumor necrosis factor receptors on stretch-induced pulmonary edema in mice. *Am. J. Physiol. Lung Cell Mol. Physiol.* **293**:L60.

Sample(s) Tested: mouse lung lavage.

Thimmulappa, R. *et al.* (2006) Nrf2 is a critical regulator of the innate immune response and survival during experimental sepsis. *J. Clin. Invest.* **116**:984.

Sample(s) Tested: mouse serum.

TOR**Surveyor IC Human Phospho-TOR (S2448) ELISA**Catalog # **SUV1665**

Range: 156-10,000 pg/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell lysate.

TRAIL/TNFSF10**Quantikine Human TRAIL/TNFSF10 ELISA**Catalog # **DTRL00**

Sensitivity: 7.87 pg/mL

Range: 15.6-1000 pg/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, cell lysate, plasma (EDTA, heparin), saliva, serum.

Niessner, A. *et al.* (2009) Prognostic value of apoptosis markers in advanced heart failure patients. *Eur. Heart J.* **30**:789.

Sample(s) Tested: human plasma (EDTA).

Secchiero, P. *et al.* (2009) Conjunctival sac fluid contains elevated levels of soluble TRAIL: implications for the anti-tumoral surveillance of the anterior surface of the eye. *J. Cell. Physiol.* **218**:199.

Sample(s) Tested: human conjunctival sac fluid, human serum, human saliva.

Ray, S. *et al.* (2008) Noninvasive imaging of therapeutic gene expression using a bidirectional transcriptional amplification strategy. *Mol. Ther.* **16**:1848.

Sample(s) Tested: HCT116 human colorectal cancer cell culture supernate.

Secchiero, P. *et al.* (2008) Tumor necrosis factor-related apoptosis-inducing ligand promotes migration of human bone marrow multipotent stromal cells. *Stem Cells* **26**:2955.

Sample(s) Tested: human mesenchymal stem cell culture supernate.

Chamoux, E. *et al.* (2008) Osteoprotegerin decreases human osteoclast apoptosis by inhibiting the TRAIL pathway. *J. Cell. Physiol.* **216**:536.

Sample(s) Tested: human cord blood mononuclear cell culture supernate.



TRANCE/RANK L/TNFSF11

Quantikine Mouse TRANCE/RANK L/TNFSF11 ELISA Catalog # MTR00

Sensitivity: 5 pg/mL
 Range: 31.2-2000 pg/mL
 Sample Volume: 50 µL
 Validated Sample Type(s): cell culture supernate, serum.

Pierroz, D.D. *et al.* (2009) β -Arrestin2 regulates RANKL and ephrins gene expression in response to bone remodeling in mice. *J. Bone Miner. Res.* **24**:775.

Sample(s) Tested: mouse bone marrow osteoclast cell culture supernate.

Somayaji, S.N. *et al.* (2008) *Staphylococcus aureus* induces expression of receptor activator of NF- κ B ligand and prostaglandin E2 in infected murine osteoblasts. *Infect. Immun.* **76**:5120.

Sample(s) Tested: mouse osteoblast cell lysate.

Valverde, P. *et al.* (2008) Overexpression of bone sialoprotein leads to an uncoupling of bone formation and bone resorption in mice. *J. Bone Miner. Res.* **23**:1775.

Sample(s) Tested: mouse serum.

Kwak, H.B. *et al.* (2008) Reciprocal cross-talk between RANKL and interferon-gamma-inducible protein 10 is responsible for bone-erosive experimental arthritis. *Arthritis Rheum.* **58**:1332.

Sample(s) Tested: mouse serum, mouse T cell culture supernate.

Liu, J. *et al.* (2008) Comparison of the effects of genistein and zoledronic acid on the bone loss in OPG-deficient mice. *Bone* **42**:950.

Sample(s) Tested: mouse serum.

TREM-1

Quantikine Human TREM-1 ELISA Catalog # DTRM10B

Sensitivity: 30.6 pg/mL
 Range: 62.5-4000 pg/mL
 Sample Volume: 50 µL
 Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.

Murakami, Y. *et al.* (2009) Intervention of an inflammation amplifier, triggering receptor expressed on myeloid cells 1, for treatment of autoimmune arthritis. *Arthritis Rheum.* **60**:1615.

Sample(s) Tested: human serum, human peripheral blood mononuclear cell culture supernate.

Quantikine Mouse TREM-1 ELISA Catalog # MTRM10

Sensitivity: 5.4 pg/mL
 Range: 31.2-2000 pg/mL
 Sample Volume: 50 µL
 Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenate.

Gibot, S. *et al.* (2007) TREM-1 promotes survival during septic shock in mice. *Eur. J. Immunol.* **37**:456.

Sample(s) Tested: homogenized mouse liver and spleen tissue, mouse plasma, mouse peritoneal fluid.

TrkA

Cell-Based ELISA Rat Phospho-TrkA (Y785) Catalog # KCB5479

Sample Volume: 100 µL
 Validated Sample Type(s): whole cells.

TSLP

Quantikine Human TSLP ELISA Catalog # DTSLPO

Sensitivity: 9.87 pg/mL
 Range: 31.2-2000 pg/mL
 Sample Volume: 50 µL
 Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Versluijs, M. *et al.* (2008) Allergen inhalation decreases adenosine receptor expression in sputum and blood of asthma patients. *Allergy* **63**:1186.

Sample(s) Tested: human sputum.

Le, T.A. *et al.* (2009) Inhibition of double-stranded RNA-induced TSLP in human keratinocytes by glucocorticoids. *Allergy* **64**:1231.

Sample(s) Tested: human keratinocyte cell culture supernate.

Quantikine Mouse TSLP ELISA Catalog # MTLPO0

Sensitivity: 6.3 pg/mL
 Range: 7.8-500 pg/mL
 Sample Volume: 50 µL
 Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Charles, N. *et al.* (2009) Lyn kinase controls basophil GATA-3 transcription factor expression and induction of Th2 cell differentiation. *Immunity* **30**:533.

Sample(s) Tested: mouse serum.

Boehme, S.A. *et al.* (2009) A small molecule CRTH2 antagonist inhibits FITC-induced allergic cutaneous inflammation. *Int. Immunol.* **21**:81.

Sample(s) Tested: homogenized mouse skin tissue.

Ohba, T. *et al.* (2008) A potential role of thymic stromal lymphopoietin in the recruitment of macrophages to mouse intervertebral disc cells via monocyte chemoattractant protein 1 induction: implications for herniated discs. *Arthritis Rheum.* **58**:3510.

Sample(s) Tested: mouse intervertebral disc explant cell culture supernate.

Esnault, S. *et al.* (2008) Thymic stromal lymphopoietin expression in allergic pulmonary inflammation is Pin1-dependent. *J. Allergy Clin. Immunol.* **121**:1289.

Sample(s) Tested: mouse fibroblast cell culture supernate.

uPAR

Quantikine Human uPAR ELISA Catalog # DUP00

Sensitivity: 33 pg/mL
 Range: 62.5-4000 pg/mL
 Sample Volume: 50 µL
 Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, urine.

Beaufort, N. *et al.* (2007) The human airway trypsin-like protease modulates the urokinase receptor (uPAR, CD87) structure and functions. *Am. J. Physiol. Lung Cell Mol. Physiol.* **292**:L1263.

Sample(s) Tested: 16HBE human bronchial epithelial cell culture supernate.

uPAR continued

Brooks, A.M. *et al.* (2006) Urokinase-type plasminogen activator modulates airway eosinophil adhesion in asthma. *Am. J. Respir. Cell Mol. Biol.* **35**:503.

Sample(s) Tested: human BALF.

Lash, G.E. *et al.* (2006) Low oxygen concentrations inhibit trophoblast cell invasion from early gestation placental explants via alterations in levels of the urokinase plasminogen activator system. *Biol. Reprod.* **74**:403.

Sample(s) Tested: human placental explant cell culture supernate.

Wang, J. *et al.* (2004) The fibroblast growth factor receptor-4 Arg388 allele is associated with prostate cancer initiation and progression. *Clin. Cancer Res.* **10**:6169.

Sample(s) Tested: human FGF R4-transfected PNT1A human prostate cancer cell lysate.

Cobos, E. *et al.* (2003) Pretreatment determination of the serum urokinase plasminogen activator and its soluble receptor in advanced small-cell lung cancer or non-small-cell lung cancer. *Clin. Appl. Thromb. Hemost.* **9**:241.

Sample(s) Tested: human serum.

VCAM-1/CD106**Quantikine Human Soluble VCAM-1/CD106 ELISA** Catalog # **DVC00***

Sensitivity: 1.26 ng/mL

Range: 6.25-200 ng/mL

Sample Volume: 100 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Jacobs, M. *et al.* (2009) Low-grade inflammation can partly explain the association between the metabolic syndrome and either coronary artery disease or severity of peripheral arterial disease: the CODAM study. *Eur. J. Clin. Invest.* **39**:437.

Sample(s) Tested: human plasma (EDTA).

Pinto, A. *et al.* (2009) Immuno-inflammatory predictors of stroke at follow-up in patients with chronic non-valvular atrial fibrillation (NVAf). *Clin. Sci.* **116**:781.

Sample(s) Tested: human plasma (citrate).

Little, J.A. *et al.* (2009) Hematologic, biochemical, and cardiopulmonary effects of L-arginine supplementation or phosphodiesterase 5 inhibition in patients with sickle cell disease who are on hydroxyurea therapy. *Eur. J. Haematol.* **82**:315.

Sample(s) Tested: human plasma.

Sun, Q. *et al.* (2008) Excessive body iron stores are not associated with risk of coronary heart disease in women. *J. Nutr.* **138**:2436.

Sample(s) Tested: human plasma.

Khaleghi, M. *et al.* (2008) Association of soluble cell adhesion molecules with ankle-brachial index in a biethnic cohort of predominantly hypertensive individuals. *Clin. Chem.* **54**:1788.

Sample(s) Tested: human plasma.

Quantikine Mouse Soluble VCAM-1/CD106 ELISA Catalog # **MVC00**

Sensitivity: 0.06 ng/mL

Range: 0.31-20 ng/mL

Sample Volume: 50 μ L

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Bro, S. *et al.* (2008) A neutralizing antibody against receptor for advanced glycation end products (RAGE) reduces atherosclerosis in uremic mice. *Atherosclerosis* **201**:274.

Sample(s) Tested: mouse plasma (EDTA).

Kahn, P. *et al.* (2008) Prevention of murine antiphospholipid syndrome by BAFF blockade. *Arthritis Rheum.* **58**:2824.

Sample(s) Tested: mouse serum.

Chiang, L.Y. *et al.* (2008) *Aspergillus fumigatus* stimulates leukocyte adhesion molecules and cytokine production by endothelial cells *in vitro* and during invasive pulmonary disease. *Infect. Immun.* **76**:3429.

Sample(s) Tested: homogenized mouse lung tissue.

Frei, A.C. *et al.* (2008) Vascular dysfunction in a murine model of severe hemolysis. *Blood* **112**:398.

Sample(s) Tested: mouse plasma (citrate).

Harja, E. *et al.* (2008) Vascular and inflammatory stresses mediate atherosclerosis via RAGE and its ligands in apoE^{-/-} mice. *J. Clin. Invest.* **118**:183.

Sample(s) Tested: mouse plasma.

VEGF**Quantikine Canine VEGF ELISA**Catalog # **CAVE00**

Sensitivity: 9.8 pg/mL (cell culture supernate), 19.5 pg/mL (serum/plasma)

Range: 19.5-1250 pg/mL (cell culture supernate), 39.1-2500 pg/mL (serum/plasma)

Sample Volume: 200 μ L (cell culture supernate), 100 μ L (serum/plasma)

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Quantikine Human VEGF ELISACatalog # **DVE00***

Sensitivity: 5 pg/mL (cell culture supernate), 9 pg/mL (serum/plasma)

Range: 15.6-1000 pg/mL (cell culture supernate), 31.2-2000 pg/mL (serum/plasma)

Sample Volume: 200 μ L (cell culture supernate), 100 μ L (serum/plasma)

Validated Sample Type(s): cell culture supernate, serum, plasma (citrate, EDTA, heparin).

Heider, U. *et al.* (2009) Synergistic interaction of the histone deacetylase inhibitor SAHA with the proteasome inhibitor bortezomib in cutaneous T cell lymphoma. *Eur. J. Haematol.* **82**:440.

Sample(s) Tested: HH and SeAX human cutaneous T cell lymphoma cell culture supernates.

Böhm, A. *et al.* (2009) Targeting of mTOR is associated with decreased growth and decreased VEGF expression in acute myeloid leukaemia cells. *Eur. J. Clin. Invest.* **39**:395.

Sample(s) Tested: human acute myeloid leukemia blast cell lysate.

Cerrillo, M. *et al.* (2009) Differential regulation of VEGF after final oocyte maturation with GnRH agonist versus hCG: a rationale for OHSS reduction. *Fertil. Steril.* **91**:1526.

Sample(s) Tested: human plasma, human follicular fluid.

Rodriguez, P.C. *et al.* (2009) Arginase I-producing myeloid-derived suppressor cells in renal cell carcinoma are a subpopulation of activated granulocytes. *Cancer Res.* **69**:1553.

Sample(s) Tested: human plasma.

Korpisalo, P. *et al.* (2008) Vascular endothelial growth factor-A and platelet-derived growth factor-B combination gene therapy prolongs angiogenic effects via recruitment of interstitial mononuclear cells and paracrine effects rather than improved pericyte coverage of angiogenic vessels. *Circ. Res.* **103**:1092.

Sample(s) Tested: homogenized human muscle tissue.


Quantikine Human VEGF/PIGF Heterodimer ELISA Catalog # **DVPH00**

Sensitivity: 10.8 pg/mL
 Range: 62.5-4000 pg/mL
 Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Lee, C.Y. *et al.* (2007) Marrow angiogenesis-associated factors as prognostic biomarkers in patients with acute myelogenous leukemia. *Br. J. Cancer* **97**:877.

Sample(s) Tested: human plasma.

QuantiGlo Chemiluminescent Human VEGF ELISA Catalog # **QVE00B**

Sensitivity: 5.99 pg/mL
 Range: 6.4-20,000 pg/mL
 Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum, urine.

Saارين, N.M. *et al.* (2008) Dietary lariciresinol attenuates mammary tumor growth and reduces blood vessel density in human MCF-7 breast cancer xenografts and carcinogen-induced mammary tumors in rats. *Int. J. Cancer* **123**:1196.

Sample(s) Tested: MCF-7 human breast cancer cell culture supernate.

Bendrik, C. *et al.* (2008) Gene transfer of matrix metalloproteinase-9 induces tumor regression of breast cancer *in vivo*. *Cancer Res.* **68**:3405.

Sample(s) Tested: homogenized human breast cancer tissue.

Etto, L. *et al.* (2008) Clinical correlations and prognostic relevance of HGF, VEGF AND FGF expression in Brazilian patients with non-Hodgkin lymphoma. *Leuk. Lymphoma* **49**:257.

Sample(s) Tested: human serum.

Cartwright, L. *et al.* (2006) Dynamic contrast-enhanced MRI to quantify VEGF-enhanced tissue-engineered bladder graft neovascularization: Pilot study. *J. Biomed. Mater. Res. A.* **77**:390.

Sample(s) Tested: rabbit bladder explant cell culture supernate.

Quantikine Mouse VEGF ELISA

 Catalog # **MMV00***

Sensitivity: 3 pg/mL
 Range: 7.8-500 pg/mL
 Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenate.

Sehrawat, S. *et al.* (2009) Role of Tim-3/galectin-9 inhibitory interaction in viral-induced immunopathology: shifting the balance toward regulators. *J. Immunol.* **182**:3191.

Sample(s) Tested: homogenized mouse cornea tissue.

Shen, H.C. *et al.* (2009) Recapitulation of pancreatic neuroendocrine tumors in human multiple endocrine neoplasia type I syndrome via Pdx1-directed inactivation of Men1. *Cancer Res.* **69**:1858.

Sample(s) Tested: homogenized mouse pancreas tissue.

Kato, N. *et al.* (2009) Kallidinogenase normalizes retinal vasopermeability in streptozotocin-induced diabetic rats: potential roles of vascular endothelial growth factor and nitric oxide. *Eur. J. Pharmacol.* **606**:187.

Sample(s) Tested: mouse ocular fluid.

Feng, Y. *et al.* (2009) Dexamethasone induces neurodegeneration but also up-regulates vascular endothelial growth factor A in neonatal rat brains. *Neuroscience* **158**:823.

Sample(s) Tested: homogenized mouse brain tissue.

Hirota, Y. *et al.* (2008) Deficiency of immunophilin FKBP52 promotes endometriosis. *Am. J. Pathol.* **173**:1747.

Sample(s) Tested: mouse peritoneal fluid.

Quantikine Rat VEGF ELISA

 Catalog # **RRV00**

Sensitivity: 25 pg/mL
 Range: 31.2-2000 pg/mL
 Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Ma, P. *et al.* (2009) Phosphomannopentaose sulfate (PI-88) inhibits retinal leukostasis in diabetic rat. *Biochem. Biophys. Res. Commun.* **380**:402.

Sample(s) Tested: homogenized rat retina tissue.

Rocha, F.G. *et al.* (2008) The effect of sustained delivery of vascular endothelial growth factor on angiogenesis in tissue-engineered intestine. *Biomaterials* **29**:2884.

Sample(s) Tested: homogenized rat intestine tissue.

Valladares, D. *et al.* (2007) Adenosine A(2B) receptor mediates an increase on VEGF-A production in rat kidney glomeruli. *Biochem. Biophys. Res. Commun.* **366**:180.

Sample(s) Tested: rat kidney glomeruli cell culture supernate.

Johansson, M. *et al.* (2007) Improved vascular engraftment and function of autotransplanted pancreatic islets as a result of partial pancreatectomy in the mouse and rat. *Diabetologia* **50**:1257.

Sample(s) Tested: rat plasma.

Gudehithlu, K.P. *et al.* (2005) Antagonism of vascular endothelial growth factor results in microvessel attrition and disorganization of wound tissue. *J. Lab. Clin. Med.* **145**:194.

Sample(s) Tested: rat serum.

VEGF-C

Quantikine Human VEGF-C ELISA

 Catalog # **DVECO0**

Sensitivity: 48.4 pg/mL
 Range: 109-7000 pg/mL
 Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), saliva, serum.

Machnik, A. *et al.* (2009) Macrophages regulate salt-dependent volume and blood pressure by a vascular endothelial growth factor-C-dependent buffering mechanism. *Nat. Med.* **15**:545.

Sample(s) Tested: human serum.

Lahat, G. *et al.* (2009) Increased vascular endothelial growth factor-C expression is insufficient to induce lymphatic metastasis in human soft-tissue sarcomas. *Clin. Cancer Res.* **15**:2637.

Sample(s) Tested: human soft-tissue sarcoma cell culture supernate.

Bogos, K. *et al.* (2009) High VEGFR-3-positive circulating lymphatic/vascular endothelial progenitor cell level is associated with poor prognosis in human small cell lung cancer. *Clin. Cancer Res.* **15**:1741.

Sample(s) Tested: human serum.

Rini, B.I. *et al.* (2008) Antitumor activity and biomarker analysis of sunitinib in patients with bevacizumab-refractory metastatic renal cell carcinoma. *J. Clin. Oncol.* **26**:3743.

Sample(s) Tested: human plasma.

Sorrentino, A. *et al.* (2008) Isolation and characterization of CD146⁺ multipotent mesenchymal stromal cells. *Exp. Hematol.* **36**:1035.

Sample(s) Tested: human mesenchymal stem cell culture supernate.

VEGF-D

Quantikine Human VEGF-D ELISA

Catalog # **DVED00**

Sensitivity: 31.3 pg/mL

Range: 125-4000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum.

Glasgow, C.G. *et al.* (2009) Serum vascular endothelial growth factor-D levels in patients with lymphangioleiomyomatosis reflect lymphatic involvement. *Chest* **135**:1293.

Sample(s) Tested: human serum.

Simiantonaki, N. *et al.* (2008) Hypoxia-induced epithelial VEGF-C/VEGFR-3 upregulation in carcinoma cell lines. *Int. J. Oncol.* **32**:585.

Sample(s) Tested: human breast, lung, and colorectal carcinoma cell culture supernates.

Kholová, I. *et al.* (2007) Adenovirus-mediated gene transfer of human vascular endothelial growth factor-d induces transient angiogenic effects in mouse hind limb muscle. *Hum. Gene Ther.* **18**:232.

Sample(s) Tested: human plasma.

Laakkonen, P. *et al.* (2007) Vascular endothelial growth factor receptor 3 is involved in tumor angiogenesis and growth. *Cancer Res.* **67**:593.

Sample(s) Tested: human breast, lung, and colorectal carcinoma cell culture supernates.

Kümmel, S. *et al.* (2006) Changes in the circulating plasma levels of VEGF and VEGF-D after adjuvant chemotherapy in patients with breast cancer and 1 to 3 positive lymph nodes. *Anticancer Res.* **26**:1719.

Sample(s) Tested: human plasma (EDTA).

VEGF R1/Flt-1

Quantikine Human Soluble VEGF R1/Flt-1 ELISA

Catalog # **DVR100B***

Sensitivity: 13.3 pg/mL

Range: 31.2-20000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, cell lysate, follicular fluid, plasma (EDTA), saliva, serum.

Heydariyan, M. *et al.* (2009) Novel splice variants of sFlt1 are upregulated in preeclampsia. *Placenta* **30**:250.

Sample(s) Tested: human serum, human cytotrophoblast cell culture supernate.

Rajakumar, A. *et al.* (2009) Novel soluble Flt-1 isoforms in plasma and cultured placental explants from normotensive pregnant and preeclamptic women. *Placenta* **30**:25.

Sample(s) Tested: human villous explant cell culture supernate.

Brownbill, P. *et al.* (2008) Vasoactivity to and endogenous release of vascular endothelial growth factor in the *in vitro* perfused human placental lobule from pregnancies complicated by preeclampsia. *Placenta* **29**:950.

Sample(s) Tested: human serum.

Muehlenbachs, A. *et al.* (2008) Natural selection of FLT1 alleles and their association with malaria resistance in utero. *Proc. Natl. Acad. Sci. U.S.A.* **105**:14488.

Sample(s) Tested: human peripheral blood mononuclear cell culture supernate.

Gutman, G. *et al.* (2008) Regulation of vascular endothelial growth factor-A and its soluble receptor sFlt-1 by luteinizing hormone *in vivo*: implication for ovarian follicle angiogenesis. *Fertil. Steril.* **89**:922.

Sample(s) Tested: human serum, human follicular fluid.

Quantikine Mouse Soluble VEGF R1/Flt-1 ELISA

Catalog # **MVR100**

Sensitivity: 15.2 pg/mL

Range: 125-8000 pg/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA), serum.

Mazzone, M. *et al.* (2009) Heterozygous deficiency of PHD2 restores tumor oxygenation and inhibits metastasis via endothelial normalization. *Cell* **136**:839.

Sample(s) Tested: mouse endothelial cell culture supernate.

Sallinen, H. *et al.* (2009) Antiangiogenic gene therapy with soluble VEGFR-1, -2, and -3 reduces the growth of solid human ovarian carcinoma in mice. *Mol. Ther.* **17**:278.

Sample(s) Tested: mouse plasma.

Satofuka, S. *et al.* (2008) (Pro)renin receptor promotes choroidal neovascularization by activating its signal transduction and tissue renin-angiotensin system. *Am. J. Pathol.* **173**:1911.

Sample(s) Tested: homogenized mouse RPE-choroid complex tissue, b-END3 mouse brain-derived endothelial cell lysate.

Purpura, K.A. *et al.* (2008) Soluble Flt-1 regulates Flk-1 activation to control hematopoietic and endothelial development in an oxygen-responsive manner. *Stem Cells* **26**:2832.

Sample(s) Tested: mouse stem cell culture supernate.

Poesen, K. *et al.* (2008) Novel role for vascular endothelial growth factor (VEGF) receptor-1 and its ligand VEGF-B in motor neuron degeneration. *J. Neurosci.* **28**:10451.

Sample(s) Tested: rat neuron cell lysate.

VEGF R2/KDR/Flk-1

Quantikine Human Soluble VEGF R2/KDR/Flk-1 ELISA

Catalog # **DVR200***

Sensitivity: 11.4 pg/mL

Range: 78.1-5000 pg/mL

Sample Volume: 100 µL

Validated Sample Type(s): cell culture supernate, cell lysate, plasma (EDTA, heparin), serum.

Ezhilarasan, R. *et al.* (2009) The hemopexin domain of MMP-9 inhibits angiogenesis and retards the growth of intracranial glioblastoma xenograft in nude mice. *Int. J. Cancer* **124**:306.

Sample(s) Tested: human endothelial cell lysate.

Burstein, H.J. *et al.* (2008) Phase II study of sunitinib malate, an oral multitargeted tyrosine kinase inhibitor, in patients with metastatic breast cancer previously treated with an anthracycline and a taxane. *J. Clin. Oncol.* **26**:1810.

Sample(s) Tested: human plasma.

Saltz, L.B. *et al.* (2007) Phase II trial of sunitinib in patients with metastatic colorectal cancer after failure of standard therapy. *J. Clin. Oncol.* **25**:4793.

Sample(s) Tested: human plasma.

Norden-Zfoni, A. *et al.* (2007) Blood-based biomarkers of SU11248 activity and clinical outcome in patients with metastatic imatinib-resistant gastrointestinal stromal tumor. *Clin. Cancer Res.* **13**:2643.

Sample(s) Tested: human plasma (EDTA).

Wallner, W. *et al.* (2007) Angiogenic growth factors in maternal and fetal serum in pregnancies complicated by intrauterine growth restriction. *Clin. Sci.* **112**:51.

Sample(s) Tested: human serum.

**Quantikine Mouse Soluble VEGF R2 ELISA**Catalog # **MVR200B**

Sensitivity: 0.049 ng/mL

Range: 0.16-10 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): cell culture supernate, plasma (EDTA, heparin), serum, tissue homogenate.

Sallinen, H. *et al.* (2009) Antiangiogenic gene therapy with soluble VEGFR-1, -2, and -3 reduces the growth of solid human ovarian carcinoma in mice. *Mol. Ther.* **17**:278.

Sample(s) Tested: mouse plasma.

Satofuka, S. *et al.* (2008) (Pro)renin receptor promotes choroidal neovascularization by activating its signal transduction and tissue renin-angiotensin system. *Am. J. Pathol.* **173**:1911.

Sample(s) Tested: b-END3 mouse brain-derived endothelial cell lysate, homogenized mouse RPE-choroid complex tissue.

Xie, B. *et al.* (2008) An Adam15 amplification loop promotes vascular endothelial growth factor-induced ocular neovascularization. *FASEB J.* **22**:2775.

Sample(s) Tested: homogenized mouse retina tissue.

Fischer, C. *et al.* (2007) Anti-PlGF inhibits growth of VEGF(R)-inhibitor-resistant tumors without affecting healthy vessels. *Cell* **131**:463.

Sample(s) Tested: mouse plasma.

Shimojo, N. *et al.* (2007) Contributory role of VEGF overexpression in endothelin-1-induced cardiomyocyte hypertrophy. *Am. J. Physiol. Heart Circ. Physiol.* **293**:H474.

Sample(s) Tested: rat cardiomyocyte cell culture supernate.

Vitamin D Binding Protein

Quantikine Human Vitamin D Binding Protein ELISACatalog # **DVDBPO**

Sensitivity: 3.74 ng/mL

Range: 15.6-250 ng/mL

Sample Volume: 50 µL

Validated Sample Type(s): breast milk, cell culture supernate, plasma (EDTA, heparin), saliva, serum, urine.

DuoSet® ELISA Development Systems

Complete ELISA kits offer accurate and reproducible results without any development time required. However, when complete ELISA kits are not an option, R&D Systems DuoSets are an economical alternative to purchasing separate antibodies and proteins. DuoSet ELISA Development Systems contain a capture antibody, biotinylated detection antibody, streptavidin-HRP, and a protein standard. Please visit www.RnDSystems.com/go/DuoSet for more information.

Note: A basic understanding of immunoassay development is required for the successful use of these products. For complex sample matrices like serum and plasma, we strongly recommend our Quantikine line of fully validated, ready-to-run ELISA kits.

DuoSet IC (Intracellular) Assay Development Kits

DuoSet IC (Intracellular) Assay Development Systems offer a fast, sensitive, and economical method to detect and quantify intracellular factors involved in apoptosis, signal transduction, and transcription in cell lysates. Extensive validation work is done in-house to ensure specificity, and detailed protocols are provided. Kits are available in 2-, 5-, and 15-(96 well) plate pack sizes. Kit contents vary depending on the assay format. Please visit www.RnDSystems.com/go/DuoSetIC for more information.

ELISAs

The target protein, either total or phosphorylated, is sandwiched between an immobilized capture antibody and a biotinylated detection antibody. A signal is generated using streptavidin-HRP and substrate (substrate sold separately).

Phosphatase Activity Assays

The target phosphatase is bound by the capture antibody. The captured phosphatase liberates phosphate from the phosphopeptide substrate, and the free phosphate is measured by a change in color of Malachite Green.

Transcription Factor Activity Assays

The target active transcription factor binds biotinylated double-stranded oligonucleotide in solution. The complex is bound by an immobilized capture antibody and detected using streptavidin-HRP and substrate (substrate sold separately). Several DuoSet IC transcription factor assays can be converted to measure total (active and inactive) transcription factor protein (see product inserts for details).

Kinase Activity Assays

Kinase activity assays offer a highly specific and sensitive method for measuring endogenous kinase activity. The captured kinase phosphorylates the provided substrate, and phosphorylated substrate is assessed using colorimetric detection.



Multiplex Assays/Arrays

Proteome Profiler™ Antibody Arrays

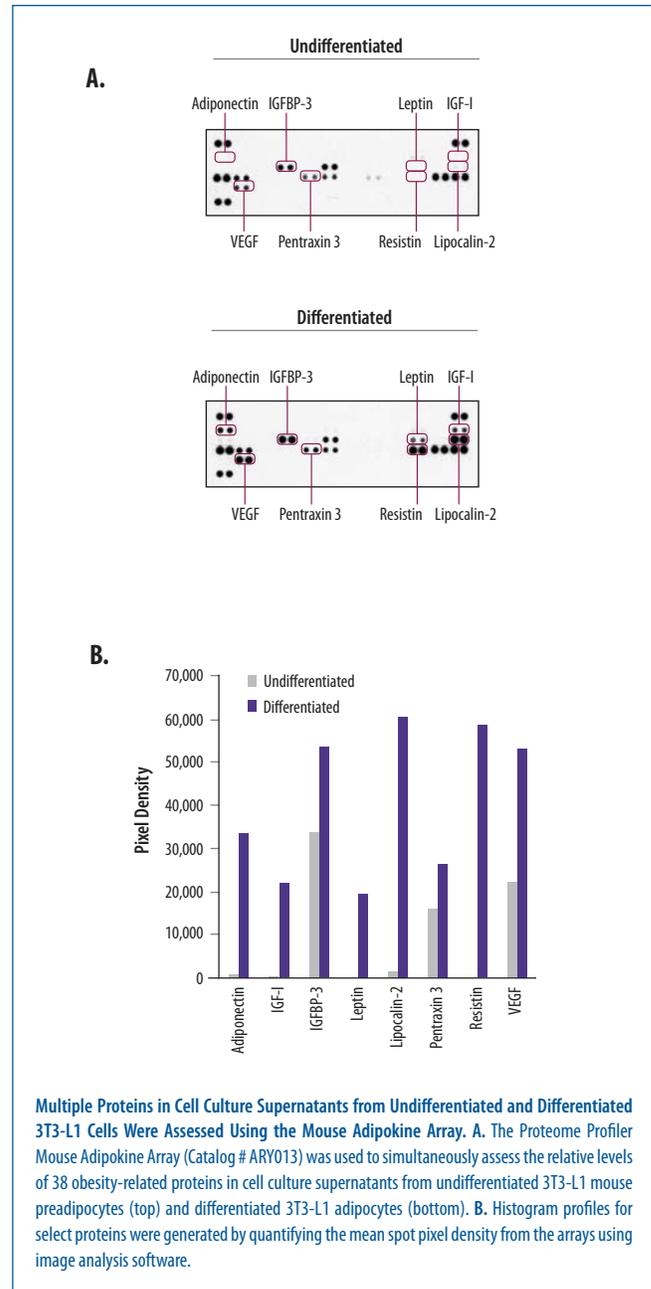
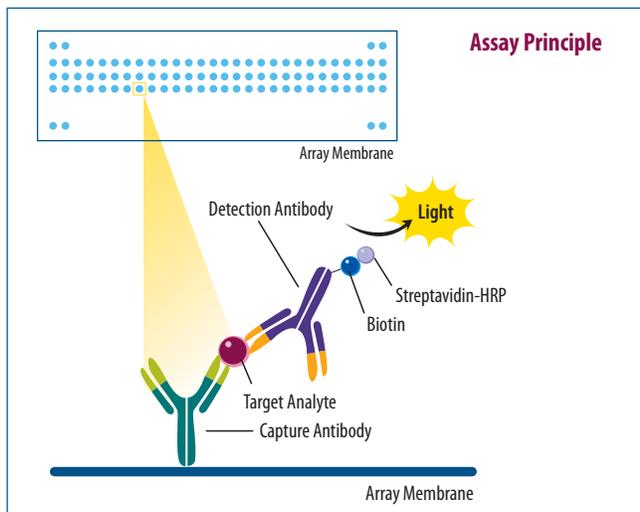
In addition to our single analyte ELISA Kits, R&D Systems offers membrane- and microplate-based antibody arrays, and bead-based assays for profiling multiple proteins simultaneously in a single sample. R&D Systems Proteome Profiler Antibody Arrays offer a convenient method for detecting the relative levels of multiple proteins in a single sample using a two-site sandwich immunoassay principle. These antibody arrays are complete kits, and are available in membrane- and microplate-based formats.

Proteome Profiler Membrane-based Antibody Arrays

Proteome Profiler Membrane-based Antibody Arrays consist of a nitrocellulose membrane spotted in duplicate with a wide panel of up to 119 capture antibodies. Macroarrays of this type are ideal for profiling multiple proteins in a small number of samples utilizing standard chemiluminescent detection reagents and equipment. Please visit our website at www.RnDSystems.com/go/ProteomeProfiler for more information.

Proteome Profiler Membrane-based Antibody Arrays

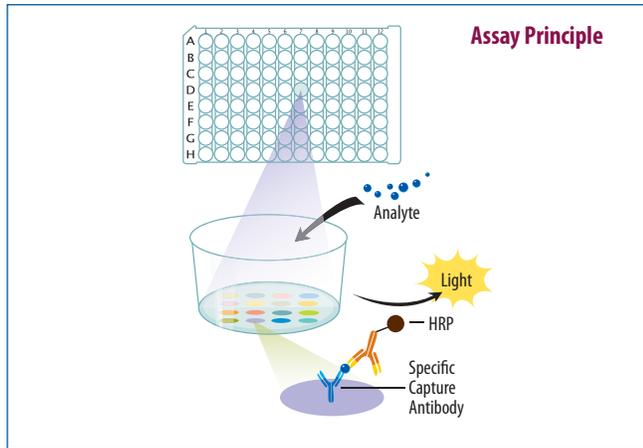
PRODUCT	CATALOG #
Mouse Adipokine Array	ARY013
Human Angiogenesis Array	ARY007
Mouse Angiogenesis Array	ARY015
Human Apoptosis Array	ARY009
Human Cytokine Array, Panel A	ARY005
Mouse Cytokine Array, Panel A	ARY006
Rat Cytokine Array, Panel A	ARY008
Human Phospho-Immunoreceptor Array	ARY004
Human Phospho-Kinase Array	ARY003
Human Phospho-Mitogen-Activated Protein Kinase (MAPK) Array	ARY002
Human Phospho-Receptor Tyrosine Kinase (RTK) Array	ARY001
Mouse Phospho-Receptor Tyrosine Kinase (RTK) Array	ARY014
Human Pluripotent Stem Cell Array	ARY010
Human Soluble Receptor Array, Hematopoietic Panel	ARY011
Human Soluble Receptor Array, Non-hematopoietic Panel	ARY012



Proteome Profiler 96 Microplate-based Antibody Arrays

Proteome Profiler 96 Microplate-based Arrays allow up to 16 different signaling proteins to be monitored simultaneously in a single well of a 96-well microplate. Each well is pre-spotted with a carefully selected panel of capture antibodies and combines the exquisite sensitivity of the traditional sandwich ELISA with the high-throughput capabilities of a multiplex panel. Chemiluminescent substrate reagents and a suitable camera imaging system[†] are

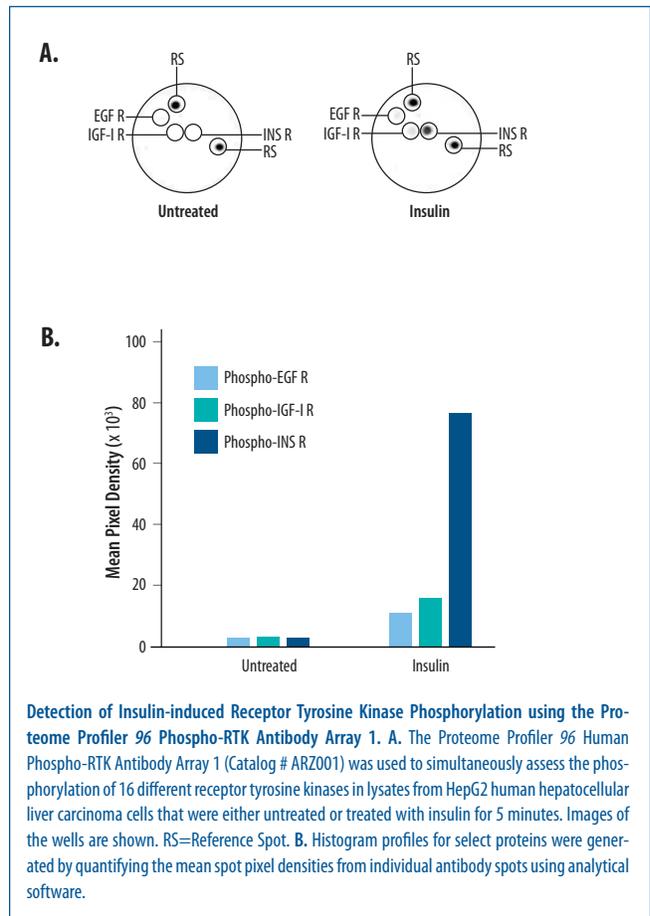
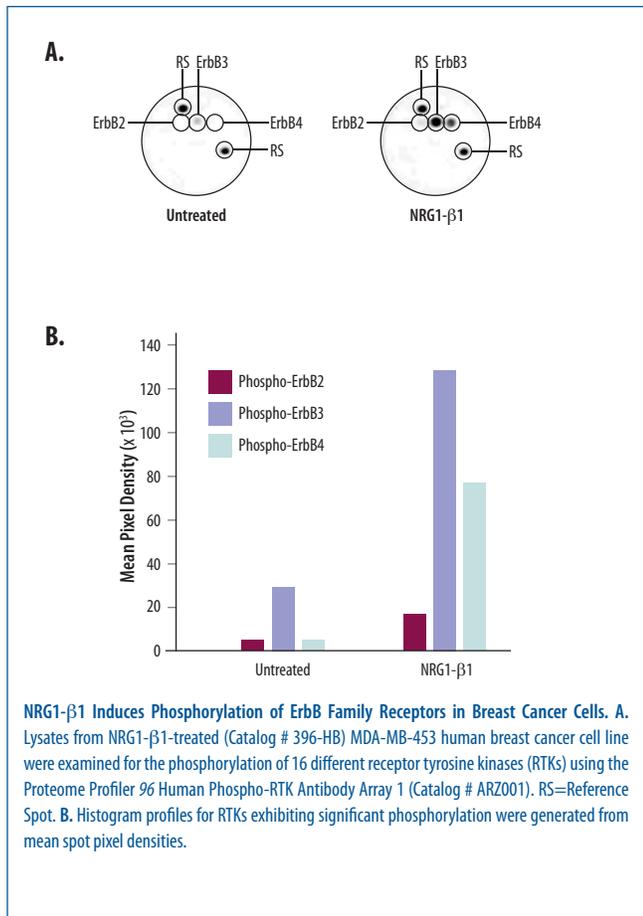
used to determine the intensity of light emitted from individual spots. Microplate-based arrays require smaller sample sizes and are more amenable to large-scale studies that monitor a specific set of cellular proteins. Free software is available for simplified data collection. Please visit our website at www.RnDSystems.com/go/ProteomeProfiler96 for additional information and instructional videos.



Proteome Profiler 96 Microplate-based Antibody Array Kits

PRODUCT	DESCRIPTION	CATALOG #
Human Phospho-RTK Array 1	16-plex RTK Array	ARZ001
	• EGF R • ErbB2 • ErbB3 • ErbB4 • HGF R • IGF-I R • INS R • M-CSF R • MSP R • PDGF R α • PDGF R β • SCF R • Tie-2 • VEGF R1 • VEGF R2 • VEGF R3	
Human Phospho-RTK Array 2	Breast Cancer 8-plex RTK Array	ARZ002
	• EGF R • EphB4 • ErbB2 • ErbB3 • ErbB4 • HGF R • IGF-I R • MSP R	
Human Phospho-RTK Array 3	Angiogenesis 8-plex RTK Array	ARZ003
	• EphB4 • PDGF R α • PDGF R β • Tie-1 • Tie-2 • VEGF R1 • VEGF R2 • VEGF R3	

[†]Compatible imaging systems tested by R&D Systems include Quansys Bioscience Q-View™ Imager; Alpha Innotech FluorChem® HD2 and FC2; BioRad® VersaDoc™ 4000 and ChemiDoc™ XRS; Fujifilm LAS-3000 or LAS-3000 Mini; Aushon BioSystems SearchLight™ Imager.



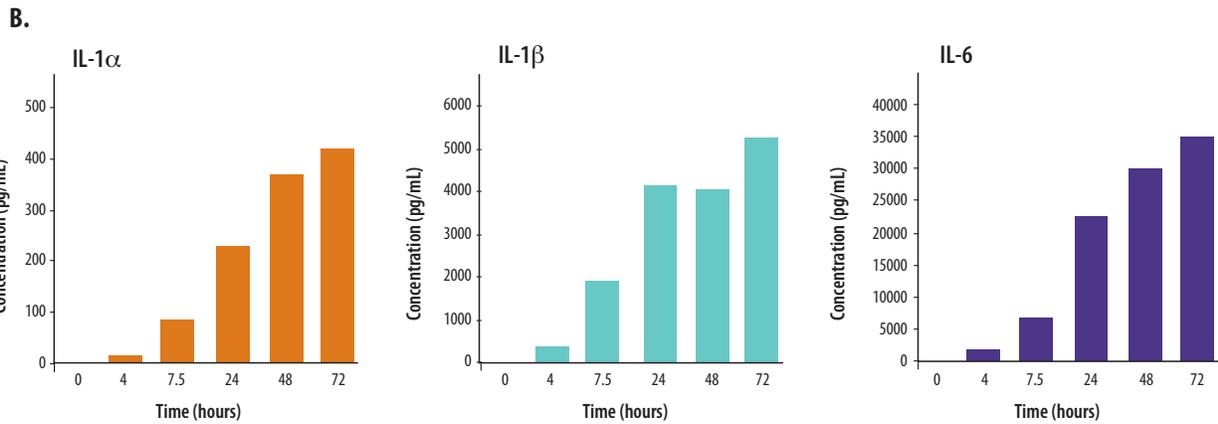
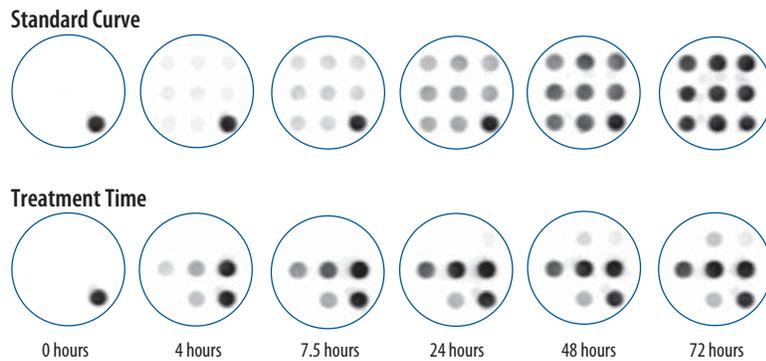
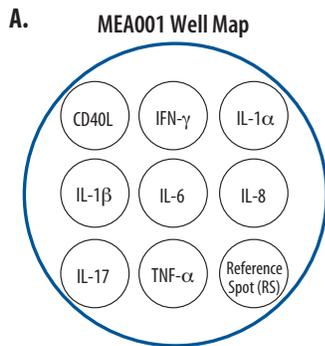
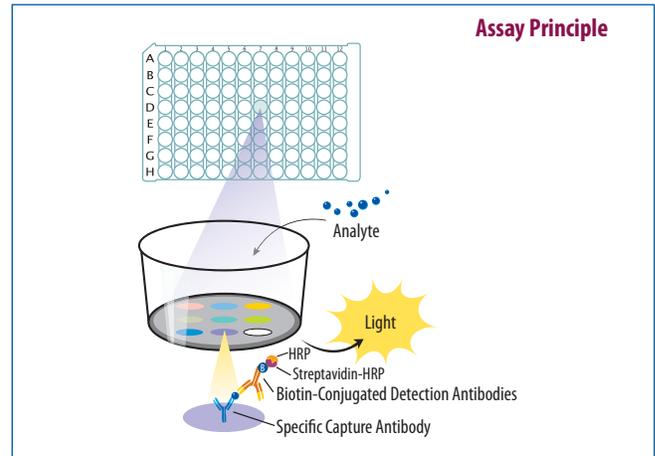
Mosaic™ ELISA

The Mosaic ELISA Kit is a 96-well microplate-based multiplex immunoassay that allows for the simultaneous quantification of 8 cytokines in a single sample of cell culture supernatant, serum, or plasma. Each kit contains a microplate that has been pre-spotted in each well with multiple capture antibodies that specifically recognize the target analytes. Utilizing the specificity of the traditional two-site sandwich immunoassay and chemiluminescent substrate reagents, a signal proportional to the amount of cytokine bound to each individual capture antibody is produced. Plates can be read using several common chemiluminescence camera systems.* The Mosaic ELISA provides an excellent alternative to performing multiple traditional ELISA experiments.

Mosaic ELISA Kit

PRODUCT	DESCRIPTION	CATALOG #
Mosaic Human Cytokine Panel 1	8-plex Cytokine Array	MEA001
• CD40L • IFN- γ • IL-1 α • IL-1 β • IL-6 • IL-8 • IL-17 • TNF- α		

*Compatible imaging systems tested by R&D Systems include Quansys Bioscience Q-View™ Imager; Alpha Innotech FluorChem™ HD2 and FC2; BioRad™ VersaDoc™ 4000 and ChemiDoc™ XRS; Fujifilm LAS-3000 or LAS-3000 Mini; Aushon BioSystems SearchLight® Imager.



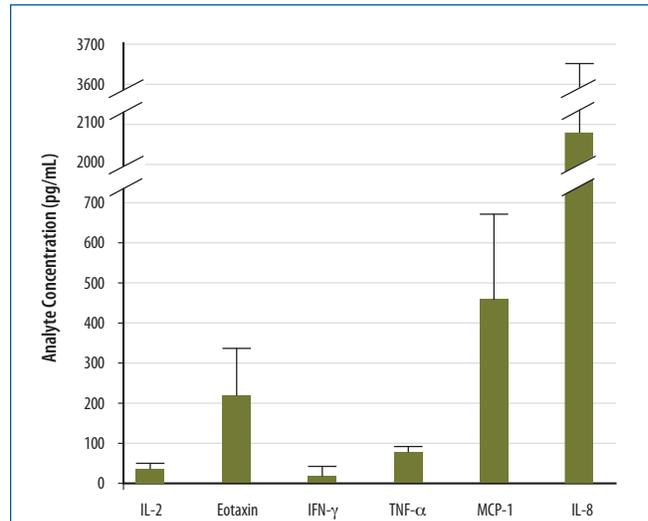
Simultaneous Detection of Multiple Analytes using the Mosaic ELISA Human Cytokine Panel. Human peripheral blood mononuclear cells were treated with PHA for the indicated times (n=5 for each time point). Aliquots of cell culture supernatants were removed and the Mosaic ELISA Human Cytokine Panel 1 (Catalog # MEA001) was used to simultaneously quantify the levels of eight different cytokines. A. A graphic depicting the spot layout in each well (left) and representative images of the wells from the standard curve and the time course experiment (right) are shown. PBMC supernatants were diluted 1:64 to ensure that the values for all of the analytes fell within the standard curve. The reference spot in each well (lower right) provides a strong positive signal for template alignment during data analysis. B. Histogram profiles for three analytes were generated by analysis of the mean spot pixel densities of individual spots in each well.

Fluorokine® MAP

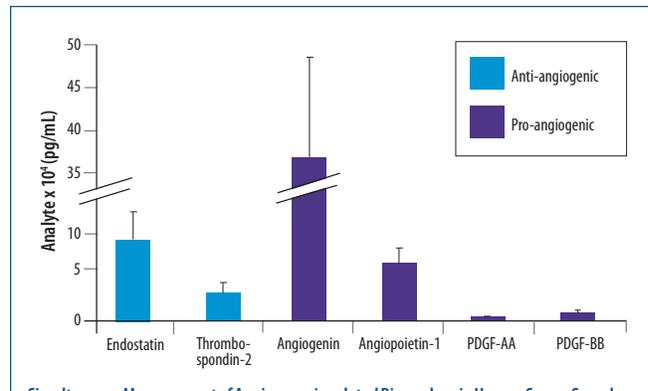
Fluorokine MultiAnalyte Profiling (MAP) Kits use the Luminex® platform and have the capability of measuring the levels of multiple proteins in a single small sample. Please visit www.RnDSystems.com/go/FMAP for more information.

- Human Adhesion Molecule Panel
- Human Angiogenesis Panel A
- Human Cytokine Panel A
- Human Cytokine Panel B
- Human MMP Panel
- Human Obesity Panel
- Mouse Cytokine Panel
- Rat Cytokine Panel
- Pre-mixed Panels
 - Inflammation 12-plex Kit
 - Primate Cytokine 11-plex Kit
 - TGF-β 3-plex Kit
 - TIMP 4-plex Kit

Luminex is a registered trademark of Luminex Corp.



Simultaneous Measurement of Multiple Primate Biomarkers in Serum Samples. The concentrations of multiple proteins were simultaneously assessed in samples of normal primate serum using the Primate Fluorokine MultiAnalyte Profiling 11-Plex Kit (Catalog # LKT006). Data are presented as the mean ± the standard deviation (n=30). IL-2 and IFN-γ were detected in 8% of the samples, TNF-α was detected in 15% of the samples, and the others were detected in greater than 95% of the samples.



Simultaneous Measurement of Angiogenesis-related Biomarkers in Human Serum Samples. Protein levels were assessed using the Fluorokine MAP Angiogenesis Base Kit (Catalog # LAN000) and the indicated bead sets. Data are presented as the mean ± the standard deviation (n=15).



Index

6Ckine, see CCL21	Chitinase 3-like 1 26	Erythropoietin/EPO 35
α 1-Acid Glycoprotein 17	CINC-1, see CXCL1	Fas/TNFRSF6/CD95 35
ACE/Angiotensin I Converting Enzyme/CD143 . . . 17	CINC-2, see CXCL3	Fas Ligand/TNFSF6 36
Activin A 17	CINC-3, see CXCL2	FABP1/L-FABP 36
Adiponectin/Acrp30 17	Clusterin 26	Fc ϵ R II, see CD23
AgRP/Agouti-related Protein 17	CNTF 26	α -Fetoprotein/AFP 36
Akt 17	Coagulation Factor III/Tissue Factor 26	FGF acidic 36
cAMP 18	Complement Factor D/Adipsin 27	FGF basic 37
Angiogenin/ANG 18	Corin 27	FGF-7, see KGF
Angiopoietin-1 18	Cortisol 27	FGF-19 37
Angiopoietin-2 18	C-Reactive Protein/CRP 27	FGF-21 37
Angiopoietin-like 3 18	Creatinine 27	Flk-1, see VEGF R2
BAFF/TNFSF13B 18	CREB 27	Flt-1, see VEGF R1
BCA-1, see CXCL13	CRG-2, see CXCL10	Flt-3 Ligand 37
BDNF 19	CTACK, see CCL27	Follistatin 38
BLC, see CXCL13	CX ₃ CL1/Fractalkine 27	Fractalkine, see CX ₃ CL1
BMP-2 19	CXCL1/GRO α /KC/CINC-1 28	FRS2 38
BMP-4 19	CXCL2/GRO β /MIP-2/CINC-3 28	Galectin-3 38
BMP-7 19	CXCL3/CINC-2 29	Gas6 38
E-Cadherin 19	CXCL5/ENA-78 29	G-CSF 38
Carbonic Anhydrase IX/CA9 20	CXCL6/GCP-2 29	GCP-2, see CXCL6
Caspase-1/ICE 20	CXCL8/IL-8 29	GDF-15 39
Caspase-3 20	CXCL9/MIG 30	GM-CSF 39
β -Catenin 20	CXCL10/IP-10/CRG-2 30	cGMP 39
Cathepsin B 20	CXCL11/I-TAC 31	gp130 40
Cathepsin V 20	CXCL12/SDF-1 α 31	GRO- α , see CXCL1
CCL2/MCP-1 20	CXCL13/BLC/BCA-1 31	Growth Hormone 40
CCL3/MIP-1 α 21	CXCL16 32	GSK-3 α / β 40
CCL4/MIP-1 β 22	Cystatin C 32	HAVCR, see TIM-1
CCL5/RANTES 22	Cytochrome c 32	HGF 40
CCL7/MCP-3 23	Dkk-1 32	HGF R 40
CCL11/Eotaxin 23	DPPIV/CD26 33	HIF-1 α 40
CCL12/MCP-5 23	EGF 33	Histone H2AX 40
CCL17/TARC 23	EGF R/ErbB1 33	HSP27 41
CCL20/MIP-3 α 24	EG-VEGF/PK1 33	HSP70 41
CCL21/6Ckine 24	ENA-78, see CXCL5	ICAM-1/CD54 41
CCL22/MDC 24	Endocan 33	IFN- α 41
CCL24/Eotaxin-2/MPIF-2 25	Endoglin/CD105 33	IFN- β 42
CCL26/Eotaxin-3 25	Endostatin 34	IFN- γ 42
CCL27/CTACK 25	Endothelin-1/ET-1 34	IFN- ω 43
CD14 25	Eotaxin, see CCL11	IGF-I 43
CD23/Fc ϵ RII 25	Eotaxin-2, see CCL24	IGFBP-3 44
CD26, see DPPIV	Eotaxin-3, see CCL26	I κ B- α 44
CD40 Ligand/TNFSF5 26	EPCR 34	IL-1 α /IL-1F1 44
CD105, see Endoglin	ErbB1, see EGF R	IL-1 β /IL-1F2 45
CD106, see VCAM-1	ErbB2/Her2 34	IL-1ra/IL-1F3 46
CD163 26	ErbB3/Her3 34	IL-1 RII/IL-1 R2 46
Chemerin 26	ERK 35	IL-1 R4, see ST2

Index continued

IL-2	47	MIG, see CXCL9	E-Selectin/CD62E	71	
IL-2 R α	47	MIP-1 α , see CCL3	L-Selectin/CD62L	72	
IL-3	47	MIP-1 β , see CCL4	P-Selectin/CD62P	72	
IL-4	48	MIP-2, see CXCL2	Serpin E1/PAI-1	73	
IL-5	49	MIP-3 α , see CCL20	SLPI	73	
IL-6	49	MMP-1	61	ST2/IL-1 R4	73
IL-6 R	51	MMP-2	62	STAT2	73
IL-7	51	MMP-3	62	STAT3	73
IL-8, see CXCL8		MMP-7	62	STAT4	73
IL-10	51	MMP-8	62	STAT5	73
IL-11	53	MMP-9	63	STAT6	73
IL-12	53	MMP-9/NGAL	63	Substance P	73
IL-12/IL-23 p40	54	MMP-10	64	Survivin	74
IL-13	54	MMP-13	64	TARC, see CCL17	
IL-15	55	MPIF-2, see CCL24		Testosterone	74
IL-16	55	Myeloperoxidase/MPO	64	TfR/Transferrin R	74
IL-17/IL-17A	56	NGAL, see Lipocalin-2		TFPI	74
IL-17 A/F	56	Nitric Oxide	65	TGF- α	74
IL-18/IL-1F4	56	endothelial Nitric Oxide Synthase/eNOS	65	TGF- β 1	75
IL-19	57	inducible Nitric Oxide Synthase/iNOS	65	TGF- β 2	75
IL-20	57	Osteopontin/OPN	65	Thrombomodulin/CD141	75
IL-22	57	Osteoprotegerin/TNFRSF11B	66	Thrombopoietin/Tpo	75
IL-23	57	p38	66	Thrombospondin-1	76
IL-27 p28	58	p38 α	66	Thrombospondin-2	76
IL-33	58	p70 S6 Kinase	66	Tie-1	76
IP-10, see CXCL10		Pappalysin-1/PAPP-A	66	Tie-2	76
I-TAC, see CXCL11		PDGF-AA	66	TIM-1/KIM-1/HAVCR	77
JNK	58	PDGF-AB	67	TIMP-1	77
Kallikrein 3/PSA	58	PDGF-BB	67	TIMP-2	77
KC, see CXCL1		PDGF R β	68	TIMP-4	78
KDR, see VEGF R2		Pentraxin 3/TSG-14	68	TNF- α	78
KGF/FGF-7	58	Periostin/OSF-2	68	TNF RI/TNFRSF1A	79
KIM-1, see TIM-1		PIGF	68	TNF RII/TNFRSF1B	80
Leptin/OB	58	PIGF-2	69	TOR	80
Leptin R	59	Pref-1/DLK-1/FA1	69	TRAIL/TNFSF10	80
Leukotriene B4/LTB $_4$	59	Progranulin	69	TRANCE/RANK L/TNFSF11	81
LIF	59	Proprotein Convertase 9/PCSK9	69	TREM-1	81
LIGHT/TNFSF14	60	Prostaglandin E $_2$	69	TrkA	81
Lipocalin-2/NGAL	60	PSA, see Kallikrein 3		TSLP	81
LOX-1/SR-E1	60	RAGE	69	uPAR	81
MBL	60	RANK L, see TRANCE		VCAM-1/CD106	82
M-CSF	61	RANTES, see CCL5		VEGF	82
MCP-1, see CCL2		RBP4/Retinol-Binding Protein 4	70	VEGF-C	83
MCP-3, see CCL7		Relaxin-2	70	VEGF-D	84
MCP-5, see CCL12		Resistin	70	VEGF R1/Flt-1	84
MDC, see CCL22		SCF/c-kit Ligand	70	VEGF R2/KDR/Flk-1	84
MEK	61	SCF R/c-kit	71	Vitamin D Binding Protein	85
β_2 -Microglobulin/ β_2 M	61	SDF-1 α , see CXCL12			