

R&D Systems Antibodies

The Antibody Reference Guide for Immunology Research represents a portion of our current database of published citations using R&D Systems products to study immune function. R&D Systems antibodies are raised against multiple species and validated for a variety of applications.

Host Species			
Mouse	Donkey	Hamster	Rat
Chicken	Goat	Rabbit	Sheep

Target Species			
Human	Canine	Equine	<i>T. gondii</i>
Mouse	Chicken	Feline	Viral
Rat	Cotton Rat	Porcine	<i>Xenopus</i>
Bovine	<i>Drosophila</i>	Primate	Zebrafish

Applications	
Western Blot	Matched Antibody Pairs for ELISA Development
Flow Cytometry (Cell Surface or Intracellular)	Immunoprecipitation
Immunohistochemistry/Immunocytochemistry	Cell Selection
Neutralization	Blockade of Receptor-Ligand Interaction

Antibody Conjugates (see page 23)	
Fluorescent (Excitation/Emission maxima)	Others
NorthernLights - 493 (493/514)	Biotin (Btn)
NorthernLights - 557 (557/575)	Alkaline Phosphatase (AP)
NorthernLights - 637 (637/658)	Horseradish Peroxidase (HRP)
Allophycocyanin (APC) (645/660)	Cell & Tissue Staining Kits
Fluorescein (CFS) (492/517)	
Phycoerythrin (PE) (565/575)	



Contents in Brief

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Alphabetical Listing of Antibodies for Selected Immunology-related Molecules

Includes selected references that highlight the use of R&D Systems antibodies in a variety of applications.

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Secondary Antibodies & Conjugates

Includes our new NorthernLights™ fluorescence conjugates.

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Frequently Asked Questions: R&D Systems Antibodies

Reference selection was not based on exclusive use of R&D Systems products or scientific merit. Rather, references were selected randomly or based on the use of unique sample types or applications that have not been validated by R&D Systems.

Alphabetical Listing of Antibodies

Molecule	Monoclonal Antibodies	Polyclonal Antibodies	Biotinylated Antibodies	Fluorochrome-labeled Antibodies
2B4/SLAMF4	H	H M	H M	
4-1BB/TNFRSF9	H M	H M	H M	
4-1BB Ligand/TNFSF9	H M	H M	H M	
8D6A		H	H	
A2B5	H M R Ch		H M R Ch	
ALCAM	H M	H M	H M	H
AMICA/JAML	H	H M	M	
Aminopeptidase N/ANPEP		M	M	
B7-1/CD80	H M R	H M R	H M R	H
B7-2/CD86	H M R	H M R	H M R	H
B7-H1/PD-L1	H M	H M	H M	
B7-H2	H	H M	H M	
B7-H3	H	H M	H M	
B7-H4	M	M	M	
BAFF R/TNFRSF13C	M	H M	M	M
BCAM	H	H	H	
BCMA/TNFRSF17	M	H M	H M	M
Common β Chain	H	H	H	
BLAME/SLAMF8	H	H	H	
BTLA		H M	M	
C1q R1/CD93	H M	H M	H M	
Cannabinoid R2/CB2/CNR2	H			
CCL1/I-309/TCA-3	H M	H M	H M	
CCL2/MCP-1	H M Ca CR	H M Ca	H M Ca	H
CCL3/MIP-1 α	H M CR	H M CR	H M CR	H M
CCL4/MIP-1 β	H M CR	H M CR	H M	H
CCL5/RANTES	H M	H M CR F	H M CR	H
CCL6/C10	M	M	M	M
CCL7/MCP-3/MARC	H	H M	H M	H
CCL8/MCP-2	H M	H M	H M	
CCL9/10/MIP-1 γ	M	M	M	
CCL11/Eotaxin	H M	H M	H M	H
CCL12/MCP-5	M	M	M	
CCL13/MCP-4	H	H	H	H
CCL14a/HCC-1	H	H	H	
CCL14b/HCC-3	H			
CCL15/MIP-1 δ	H	H	H	H
CCL16/HCC-4	H	H	H	H
CCL17/TARC	H M	H M	H M	H
CCL18/PARC	H	H	H	H
CCL19/MIP-3 β	H M	H M	H M	H
CCL20/MIP-3 α	H M R	H M R	H M R	H
CCL21/6Ckine	H M	H M	H M	

4-1BB/TNFRSF9

Application: Immunohistochemistry

Product: Human 4-1BB/TNFRSF9 Polyclonal
Catalog # AF838

Reference(s):

Maerten, P. *et al.* (2004) Functional expression of 4-1BB (CD137) in the inflammatory tissue in Crohn's disease. *Clin. Immunol.* **112**:239.

Sample(s) Tested: human ileal, colon, gut, and lymph tissue

Product: Human 4-1BB/TNFRSF9
Biotin Polyclonal
Catalog # BAF838

Reference(s):

Lindstedt, M. *et al.* (2003) Expression of CD137 (4-1BB) on human follicular dendritic cells. *Scand. J. Immunol.* **57**:305.

Sample(s) Tested: human tonsil

B7-1/CD80

Application: Flow Cytometry

Product: Human B7-1/CD80 Monoclonal
Catalog # MAB140

Reference(s):

Manzotti, C.N. *et al.* (2002) Inhibition of human T cell proliferation by CTLA-4 utilizes CD80 and requires CD25⁺ regulatory T cells. *Eur. J. Immunol.* **32**:2888.

Sample(s) Tested: human T cells

Sumitran-Holgersson, S. *et al.* (2004) A novel mechanism of liver allograft rejection facilitated by antibodies to liver sinusoidal endothelial cells. *Hepatology* **40**:1211.

Sample(s) Tested: human liver sinusoidal endothelial cells and human aortic endothelial cells

Application: Neutralization

Product: Human B7-1/CD80 Monoclonal
Catalog # MAB140

Reference(s):

Watanabe, N. *et al.* (2005) Hassall's corpuscles instruct dendritic cells to induce CD4⁺CD25⁺ regulatory T cells in human thymus. *Nature* **436**:1181.

Sample(s) Tested: human dendritic and T cell co-culture

Boasso, A. *et al.* (2005) Regulation of indoleamine 2,3-dioxygenase and tryptophanyl-tRNA-synthetase by CTLA-4-Fc in human CD4⁺ T cells. *Blood* **105**:1574.

Sample(s) Tested: human peripheral blood mononuclear cells

Zheng, Y. *et al.* (2004) CD86 and CD80 differentially modulate the suppressive function of human regulatory T cells. *J. Immunol.* **172**:2778.

Sample(s) Tested: human dendritic cells

B7-H1/PD-L1

Application: ELISA Development

Product: Human B7-H1 Polyclonal
Catalog # AF156

Reference(s):

Wan, B. *et al.* (2006) Aberrant regulation of synovial T cell activation by soluble costimulatory molecules in rheumatoid arthritis. *J. Immunol.* **177**:8844.

Sample(s) Tested: human serum and synovial fluid

Application: Flow Cytometry

Product: Human B7-H1 Monoclonal
Catalog # MAB156

Reference(s):

Kamihira, T. *et al.* (2005) Biliary epithelial cells regulate autoreactive T cells: implications for biliary-specific diseases. *Hepatology* **41**:151.

Sample(s) Tested: human biliary epithelial cells

CCL1/I-309/TCA-3

Application: ELISA Development

Product: Mouse CCL1/I-309/TCA-3
Biotin Polyclonal
Catalog # BAF845

Reference(s):

Yang, L. & T. Mosmann. (2004) Synthesis of several chemokines but few cytokines by primed uncommitted precursor CD4 T cells suggests that these cells recruit other immune cells without exerting direct effector functions. *Eur. J. Immunol.* **34**:1617.

Sample(s) Tested: mouse T cells

CCL3/MIP-1 α

Application: Immunohistochemistry

Product: Mouse CCL3/MIP-1 α Polyclonal
Catalog # AF-450-NA

Reference(s):

Cardona, A.E. *et al.* (2003) CC chemokines mediate leukocyte trafficking into the central nervous system during murine neurocysticercosis: role of gamma delta T cells in amplification of the host immune response. *Infect. Immun.* **71**:2634.

Sample(s) Tested: mouse T cells isolated from brain

Yang, X. *et al.* (2006) Essential contribution of a chemokine, CCL3, and its receptor, CCR1, to hepatocellular carcinoma progression. *Int. J. Cancer* **118**:1869.

Sample(s) Tested: mouse hepatocarcinoma



CCL3/MIP-1 α in Peripheral Blood Mononuclear Cells (PBMC). CCL3/MIP-1 α was detected in human PBMC with biotinylated anti-human CCL3/MIP-1 α polyclonal antibody (Catalog # BAF270). Cells were stained using DAB as the peroxidase substrate.

CCL5/RANTES

Application: Cell-based ELISA Development

Product: Human CCL5/RANTES Monoclonal
Catalog # MAB678

Reference(s):

Bandeira-Melo, C. *et al.* (2002) IL-16 promotes leukotriene C(4) and IL-4 release from human eosinophils via CD4- and autocrine CCR3-chemokine-mediated signaling. *J. Immunol.* **168**:4756.

Sample(s) Tested: human eosinophils

Application: ELISA Development

Product: Human CCL5/RANTES Monoclonal
Catalog # MAB678

Reference(s):

Cho, M.L. *et al.* (2006) Transforming growth factor beta 1 (TGF-beta1) down-regulates TNFalpha-induced RANTES production in rheumatoid synovial fibroblasts through NF-kappaB-mediated transcriptional repression. *Immunol. Lett.* **105**:159.

Sample(s) Tested: human fibroblast-like synoviocytes, serum, and synovial fluid

Application: Immunohistochemistry

Product: Mouse CCL5/RANTES
Biotin Polyclonal
Catalog # BAF478

Reference(s):

Murai, M. *et al.* (2003) Peyer's patch is the essential site in initiating murine acute and lethal graft-versus-host reaction. *Nat. Immunol.* **4**:154.

Sample(s) Tested: mouse intestine

Product: Mouse CCL5/RANTES Polyclonal
Catalog # AF478

Reference(s):

Robinson, S.C. *et al.* (2003) A chemokine receptor antagonist inhibits experimental breast tumor growth. *Cancer Res.* **63**:8360.

Sample(s) Tested: mouse tumor

Application: In Vivo

Product: Mouse CCL5/RANTES Monoclonal
Catalog # MAB478

Reference(s):

Martinez de la Torre, Y. *et al.* (2007) Protection against inflammation- and autoantibody-caused fetal loss by the chemokine decoy receptor D6. *Proc. Natl. Acad. Sci. USA* **104**:2319.

Sample(s) Tested: mouse

Application: Western Blot

Product: Mouse CCL5/RANTES Polyclonal
Catalog # AF478

Reference(s):

Bitko, V. *et al.* (2007) Viral infection of the lungs through the eye. *J. Virol.* **81**:783.

Sample(s) Tested: mouse eye

CCL17/TARC

Application: ELISA Development

Product: Human CCL17/TARC Biotin Polyclonal
Catalog # BAF529

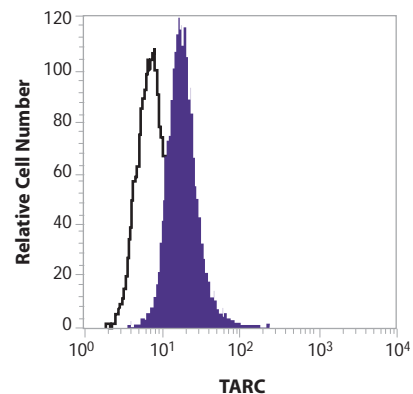
Reference(s):

Bengtsson, A.K. *et al.* (2004) 17beta-estradiol (E2) modulates cytokine and chemokine expression in human monocyte-derived dendritic cells. *Blood* **104**:1404.

Sample(s) Tested: human monocyte-derived dendritic cells

Application: Flow Cytometry

Product: Human CCL17/TARC PE Monoclonal
Catalog # IC3641P



Intracellular Detection of CCL17/TARC by Flow Cytometry. Human lung carcinoma A549 cells were stained with PE-conjugated mouse anti-human CCL17/TARC monoclonal antibody (Catalog # IC3641P, filled histogram) or isotype control (Catalog # IC002P, open histogram).

Molecule	Monoclonal Antibodies	Polyclonal Antibodies	Biotinylated Antibodies	Fluorochrome-labeled Antibodies
CCL22/MDC	H M	H M	H M	H
CCL23/MPIF-1	H	H	H	H
CCL24/Eotaxin-2	H M	H M	H M	
CCL25/TECK	H M	H M	H M	
CCL26/Eotaxin-3	H	H	H	
CCL26-like/Eotaxin-3-like		R		
CCL27/CTACK	H M	H M	H M	
CCL28	H M	H M	H M	
CCR1	H		H	H
CCR2	H			H
CCR3	H M			H M
CCR4	H			H
CCR5	H		H	H
CCR6	H M			H M
CCR7	H M			H
CCR8	H			H
CCR9	H M			H M
CD2	H M	H M	H M	H
CD2F-10/SLAMF9	M	M	M	
CD3	H M		M	H M
CD4	H M Ca F	H M Ca F	H M Ca	H M
CD5	H M	H	H M	H M
CD5L	M	H M	H	
CD6	H M	H M	H M	
CD8	H M	F	M	H M
CD9	H			H
CD14	H M	H M	H M	H
CD23/Fcε RII	H	H	H	H
CD27/TNFRSF7	H M	H M	H M	
CD27 Ligand/TNFSF7	H M	M	M	
CD28	H	H M	H M	H
CD30/TNFRSF8	H M	H M	H M	H
CD30 Ligand/TNFSF8	H M	H M	H M	H
CD31/PECAM-1	H	H M	H	H
CD36/SR-B3	H M	H M	M	
CD40/TNFRSF5	H M	H M	H M	H M
CD40 Ligand/TNFSF5	H M	H M	H M	H M
CD43	H	H	H	H
CD45	H M	M	H M	H M
CD48/SLAMF2	H M	H M	M	
CD58/LFA-3	H	H	H	H
CD68	H	H		H
CD69	H M	H M	H M	
CD72	M	M	M	
CD74	H			

CCL17/TARC Continued

Application: Neutralization

Product: Mouse CCL17/TARC Polyclonal
Catalog # AF529

Reference(s):

Fujita, H. *et al.* (2005) Differential production of Th1- and Th2-type chemokines by mouse Langerhans cells and splenic dendritic cells. *J. Invest. Dermatol.* **124**:343.
Sample(s) Tested: mouse dendritic cells

CCL19/MIP-3β

Application: Neutralization

Product: Mouse CCL19/MIP-3β Polyclonal
Catalog # AF880

Reference(s):

Yasuda, T. *et al.* (2007) Chemokines CCL19 and CCL21 promote activation-induced cell death of antigen-responding T cells. *Blood* **109**:449.

Sample(s) Tested: mouse T cells

CCR5

Application: Flow Cytometry

Product: Human CCR5 Monoclonal
Catalog # MAB182

Reference(s):

Lepej, S.Z. *et al.* (2005) Increased expression of CXCR3 and CCR5 on memory CD4⁺ T-cells migrating into the cerebrospinal fluid of patients with neuroborreliosis: the role of CXCL10 and CXCL11. *J. Neuroimmunol.* **163**:128.

Sample(s) Tested: human T cells

Burman, A. *et al.* (2005) A chemokine-dependent stromal induction mechanism for aberrant lymphocyte accumulation and compromised lymphatic return in rheumatoid arthritis. *J. Immunol.* **174**:1693.

Sample(s) Tested: human lymphocytes

Application: Immunohistochemistry

Product: Human CCR5 Monoclonal
Catalog # MAB181

Reference(s):

Kieseier, B.C. *et al.* (2002) Chemokines and chemokine receptors in inflammatory demyelinating neuropathies: a central role for IP-10. *Brain* **125**:823.

Sample(s) Tested: human nerve

Ruster, M. *et al.* (2004) Differential expression of β-chemokines MCP-1 and RANTES and their receptors CCR1, CCR2, CCR5 in acute rejection and chronic allograft nephropathy of human renal allografts. *Clin. Nephrol.* **61**:30.

Sample(s) Tested: human kidney

Product: Human CCR5 Monoclonal
Catalog # MAB182

Reference(s):

Howard, O.M. *et al.* (2002) Histidyl-tRNA synthetase and asparaginyl-tRNA synthetase, autoantigens in myositis, activate chemokine receptors on T lymphocytes and immature dendritic cells. *J. Exp. Med.* **196**:781.

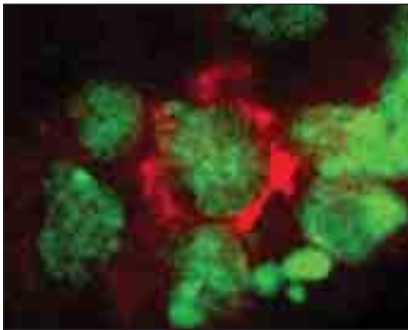
Sample(s) Tested: human muscle

Product: Human CCR5 Monoclonal
Catalog # MAB183

Reference(s):

Fotopoulos, G. *et al.* (2002) Transepithelial transport of HIV-1 by M cells is receptor-mediated. *Proc. Natl. Acad. Sci. U.S.A.* **99**:9410.

Sample(s) Tested: human Caco-2 colon carcinoma cell line and Peyer's patches of distal ileum



CCR5 in Human Peripheral Blood Mononuclear Cells (PBMC). CCR5 was detected in human PBMC using anti-human CCR5 monoclonal antibody (Catalog # MAB183). Cells were stained using a Rhodamine Red™ X-conjugated anti-mouse IgG secondary antibody (red) and counterstained with FluoroNissl™ green.

Application: Neutralization

Product: Human CCR5 Monoclonal
Catalog # MAB182

Reference(s):

Rahangdale, S. *et al.* (2006) Chemokine receptor CXCR3 desensitization by IL-16/CD4 signaling is dependent on CCR5 and intact membrane cholesterol. *J. Immunol.* **176**:2337.

Sample(s) Tested: human T cells

Kawamura, T. *et al.* (2003) R5 HIV productively infects Langerhans cells, and infection levels are regulated by compound CCR5 polymorphisms. *Proc. Natl. Acad. Sci. U.S.A.* **100**:8401.

Sample(s) Tested: human Langerhans, dendritic, and T cells

Application: Western Blot

Product: Human CCR5 Monoclonal
Catalog # MAB1801

Reference(s):

Ottoneo, L. *et al.* (2005) CCL3 (MIP-1 α) induces *in vitro* migration of GM-CSF-primed human neutrophils via CCR5-dependent activation of ERK 1/2. *Cell. Signal.* **17**:355.

Sample(s) Tested: human neutrophils

CCR7

Application: Flow Cytometry

Product: Human CCR7 PE Monoclonal
Catalog # FAB197P

Reference(s):

Wilson, J.L. *et al.* (2006) Endothelins induce CCR7 expression by breast tumor cells via endothelin receptor A and hypoxia-inducible factor-1. *Cancer Res.* **66**:11802.

Sample(s) Tested: human MCF-7, SKBR-3, and MDAMB231 breast cancer cell lines

Application: Immunohistochemistry

Product: Human CCR7 CFS Monoclonal Catalog # FAB197F

Reference(s):

Burman, A. *et al.* (2005) A chemokine-dependent stromal induction mechanism for aberrant lymphocyte accumulation and compromised lymphatic return in rheumatoid arthritis. *J. Immunol.* **174**:1693.

Sample(s) Tested: human rheumatoid synovium, salivary gland, and tonsil

CD31/PECAM-1

Application: Immunohistochemistry

Product: Human CD31/PECAM-1 Monoclonal
Catalog # BBA7

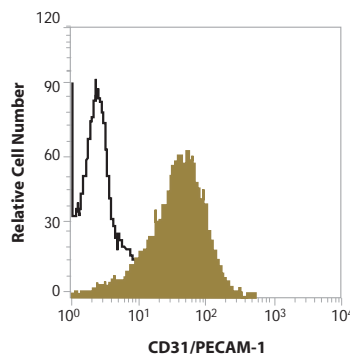
Reference(s):

Kuroshima, S. *et al.* (2004) Expression of Toll-like receptors 2 and 4 on human intestinal lymphatic vessels. *Microvasc. Res.* **67**:90.

Sample(s) Tested: human lymphatic vessels

Carman, C.V. & T.A. Springer. (2004) A transmigratory cup in leukocyte diapedesis both through individual vascular endothelial cells and between them. *J. Cell Biol.* **167**:377.

Sample(s) Tested: human neutrophils, monocytes, umbilical vein endothelial and peripheral blood mononuclear cells



Detection of CD31/PECAM-1 by Flow Cytometry.

Human umbilical vascular endothelial cells (HUVEC) were stained using APC-conjugated mouse anti-human CD31/PECAM-1 monoclonal antibody (Catalog # FAB3567A; filled histogram). Staining with an APC-conjugated isotype control (Catalog # IC002A; open histogram) highlights the specificity of the CD31/PECAM-1 antibody.

CD40 Ligand/TNFSF5

Application: Western Blot

Product: Human CD40 Ligand/TNFSF5
Biotin Polyclonal
Catalog # BAF617

Reference(s):

Allen, C. *et al.* (2004) Adenoviral vectors expressing fusogenic membrane glycoproteins activated via matrix metalloproteinase cleavable linkers have significant antitumor potential in the gene therapy of gliomas. *J. Gene Med.* **6**:1216.

Sample(s) Tested: human glioma cell line lysates

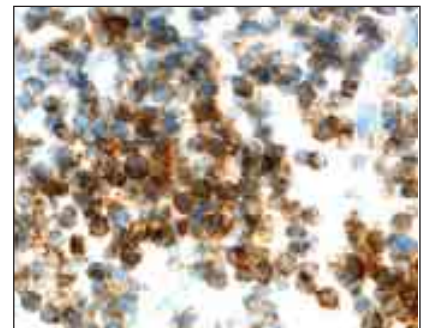
Application: Neutralization

Product: Human CD40 Ligand/TNFSF5
Monoclonal
Catalog # MAB617

Reference(s):

Decker, W.K. *et al.* (2006) Double loading of dendritic cell MHC class I and MHC class II with an AML antigen repertoire enhances correlates of T cell immunity *in vitro* via amplification of T cell help. *Vaccine* **24**:3203.

Sample(s) Tested: human dendritic cells



CD40 Ligand/TNFSF5 in Human Tonsils. CD40 ligand was detected in paraffin-embedded human tonsil tissue sections using anti-human CD40 ligand polyclonal antibody (Catalog # AF617). Tissue was stained using the anti-goat HRP-DAB Cell and Tissue Staining Kit (Catalog # CTS008; brown) and counterstained with hematoxylin (blue).

Application: Flow Cytometry

Product: Mouse CD83 Polyclonal
Catalog # AF1437

Reference(s):

Kurooka, M. & Y. Kaneda. (2007) Inactivated Sendai virus particles eradicate tumors by inducing immune responses through blocking regulatory T cells. *Cancer Res.* **67**:227.

Sample(s) Tested: mouse myeloid dendritic cells

Molecule	Monoclonal Antibodies	Polyclonal Antibodies	Biotinylated Antibodies	Fluorochrome-labeled Antibodies
CD83	H	H M	H	H
CD84/SLAMF5	H	H	H	
CD90/Thy1	H			H
CD94	H			H
CD97	H	H M	H	
CD99		M	H	
CD151	H			H
CD155/PVR	H	H	H	
CD160	M			
CD163	H	H	H	H
CD177/PRV1		H		
CD229/SLAMF3	H	H M	H M	H
CEACAM-1/CD66a	H	H	H	H
Chem R23	H			
Chemerin	H M	H M	H	
Chymase/CMA1		H		
CINC-1	R	R	R	
CINC-2	R	R	R	
CINC-3	R	R	R	
CL-P1/COLEC12	H M	H M	M	
CLEC-1	H	H	H	
CLEC-2	H	H	H	
Coagulation Factor III/Tissue Factor	H M	H M	H M	
Common γ Chain/IL-2 R γ	H M	H M	H M	H M
CRACC/SLAMF7	H	H		H
CRTAM	H	H	H	H
CRTH-2	H			
CTLA-4	H M	H M	H M	H M
CX3CL1/Fractalkine	H M R	H M R	H M R	H
CXCL1/GRO α	H	H	H	H
CXCL2/GRO β	H			
CXCL3/GRO γ	H			
CXCL4/PF4	H M	H M	H M	H
CXCL5/ENA	H	H	H	H
CXCL6/GCP-2	H	H	H	
CXCL7/NAP-2	H	H	H	
CXCL8/IL-8	H Ca P	H Ca F P	H Ca P	H
CXCL9/MIG	H	H M	H M	H
CXCL10/IP-10/CRG-2	H M	H M CR	H M CR	H
CXCL11/I-TAC	H M	H M	H M	
CXCL12/SDF-1	H M	H	H M	
CXCL13/BLC/BCA-1	H M	H M	H M	
CXCL14/BRAK	H M	H M	H M	
CXCL15/Lungkine	M	M	M	

CTLA-4

Application: ELISA Development

Product: Mouse CTLA-4 Polyclonal
Catalog # AF476

Reference(s):

Bonham, C.A. *et al.* (2002) Marked prolongation of cardiac allograft survival by dendritic cells genetically engineered with NF-kappa B oligodeoxyribonucleotide decoys and adenoviral vectors encoding CTLA4-Ig. *J. Immunol.* **169**:3382.

Sample(s) Tested: mouse serum

Application: Functional Assay

Product: Mouse CTLA-4 Monoclonal
Catalog # MAB434

Reference(s):

Kipnis, J. *et al.* (2004) Dopamine, through the extracellular signal-regulated kinase pathway, downregulates CD4⁺CD25⁺ regulatory T-cell activity: implications for neurodegeneration. *J. Neurosci.* **24**:6133.

Sample(s) Tested: mouse T cells

CXCR3

Application: Flow Cytometry

Product: Mouse CXCR3 Monoclonal
Catalog # MAB1685

Reference(s):

Lee, J.H. *et al.* (2007) FoxP3⁺ T cells undergo conventional first switch to lymphoid tissue homing receptors in thymus but accelerated second switch to nonlymphoid tissue homing receptors in secondary lymphoid tissues. *J. Immunol.* **178**:301.

Sample(s) Tested: mouse T cells

Product: Human CXCR3 PE Monoclonal
Catalog # FAB160P

Reference(s):

Dagan-Berger, M. *et al.* (2006) Role of CXCR3 carboxyl terminus and third intracellular loop in receptor-mediated migration, adhesion and internalization in response to CXCL11. *Blood* **107**:3821.

Sample(s) Tested: human HEK293, YTS, RBL, and Jurkat cells

Product: Human CXCR3 Monoclonal
Catalog # MAB160

Reference(s):

Kim, C.H. *et al.* (2003) Dendritic cells support sequential reprogramming of chemoattractant receptor profiles during naive to effector T cell differentiation. *J. Immunol.* **171**:152.

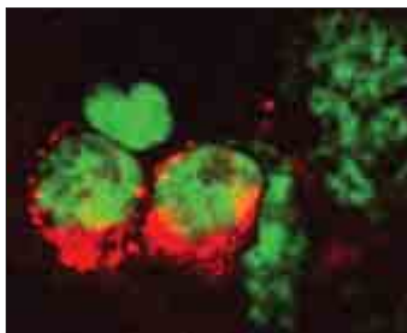
Sample(s) Tested: human T cells

Teleshova, N. *et al.* (2002) Multiple sclerosis and optic neuritis: CCR5 and CXCR3 expressing T cells are augmented in blood and cerebrospinal fluid. *J. Neurol.* **249**:723.

Sample(s) Tested: human peripheral blood mononuclear cells

Application: Immunohistochemistry**Product:** Human CXCR3 Monoclonal
Catalog # MAB170**Reference(s):**Sfriso, P. *et al.* (2006) Epithelial CXCR3-B regulates chemokines bioavailability in normal, but not in Sjogren's syndrome, salivary glands. *J. Immunol.* **176**:2581.**Sample(s) Tested:** human labial salivary glandsSrivastava, B.I. & M.D. Srivastava. (2005) Establishment and characterization of SRIK-NKL: a novel CD8⁺ natural killer/T cell line derived from a patient with leukemic phase of acute lymphoblastic lymphoma. *Leuk. Res.* **29**:771.**Sample(s) Tested:** human SRIK-NKL blast cellsKawada, K. *et al.* (2004) Pivotal role of CXCR3 in melanoma cell metastasis to lymph nodes. *Cancer Res.* **64**:4010.**Sample(s) Tested:** human melanomaLim, H.W. *et al.* (2004) Regulatory T cells can migrate to follicles upon T cell activation and suppress GC-Th cells and GC-Th cell-driven B cell responses. *J. Clin. Invest.* **114**:1640.**Sample(s) Tested:** human tonsil mononuclear cells**Application: Western Blot****Product:** Human CXCR3 Monoclonal
Catalog # MAB170**Reference(s):**Yang, J. & A. Richmond. (2004) The angiostatic activity of interferon-inducible protein-10/CXCL10 in human melanoma depends on binding to CXCR3 but not to glycosaminoglycan. *Mol. Ther.* **9**:846.**Sample(s) Tested:** chinese hamster ovary cells transfected with human CXCR3

CXCR4

Application: Flow Cytometry**Product:** Human CXCR4 PE Monoclonal
Catalog # FAB173P**Reference(s):**Watanabe, S. *et al.* (2007) Hematopoietic stem cell-engrafted NOD/SCID/IL2R γ null mice develop human lymphoid systems and induce long-lasting HIV-1 infection with specific humoral immune responses. *Blood* **109**:212.**Sample(s) Tested:** human T cellsHatse, S. *et al.* (2003) Mutations at the CXCR4 interaction sites for AMD3100 influence anti-CXCR4 antibody binding and HIV-1 entry. *FEBS Lett.* **546**:300.**Sample(s) Tested:** human astroglial cells and U87.CD4 astroglia cell line stably transfected with CXCR4 variants**Application: Immunohistochemistry****Product:** Human CXCR4 Monoclonal
Catalog # MAB170**Reference(s):**Lisignoli, G. *et al.* (2006) Hyaluronan-based polymer scaffold modulates the expression of inflammatory and degradative factors in mesenchymal stem cells: Involvement of Cd44 and Cd54. *J. Cell. Physiol.* **207**:364.**Sample(s) Tested:** human mesenchymal stem cells**CXCR4 Expression on Human Peripheral Blood Mononuclear Cells (PBMC).** CXCR4 was detected on human PBMC with anti-human CXCR4 monoclonal antibody (Catalog # MAB172). Cells were stained using a Rhodamine Red X-conjugated anti-mouse IgG secondary antibody (red) and counterstained with FluoroNissl green.**Reference(s):**Fotopoulos, G. *et al.* (2002) Transepithelial transport of HIV-1 by M cells is receptor-mediated. *Proc. Natl. Acad. Sci. U.S.A.* **99**:9410.**Sample(s) Tested:** human Caco-2 colon carcinoma cell line and Peyer's patches of distal ileum**Application: Neutralization****Product:** Human CXCR4 Monoclonal
Catalog # MAB170**Reference(s):**Lee, R.H. *et al.* (2006) A subset of human rapidly self-renewing marrow stromal cells preferentially engraft in mice. *Blood* **107**:2153.**Sample(s) Tested:** human mesenchymal stem cells**Application: Western Blot****Product:** Human CXCR4 Monoclonal
Catalog # MAB173**Reference(s):**Mochizuki, H. *et al.* (2004) Interaction of ligand-receptor system between stromal-cell-derived factor-1 and CXCR4 chemokine receptor 4 in human prostate cancer: a possible predictor of metastasis. *Biochem. Biophys. Res. Commun.* **320**:656.**Sample(s) Tested:** human DU145, LNCaP, and PC3 prostate cancer cell lines

CXCR6

Application: Flow Cytometry**Product:** Mouse CXCR6 Monoclonal
Catalog # MAB2145**Reference(s):**Lee, J.H. *et al.* (2007) FoxP3⁺ T cells undergo conventional first switch to lymphoid tissue homing receptors in thymus but accelerated second switch to nonlymphoid tissue homing receptors in secondary lymphoid tissues.*J. Immunol.* **178**:301.**Sample(s) Tested:** mouse T cells**Product:** Human CXCR6 Monoclonal
Catalog # MAB699**Reference(s):**Patel, D.N. *et al.* (2006) TLR4-NOX4-AP-1 signaling mediates lipopolysaccharide-induced CXCR6 expression in human aortic smooth muscle cells. *Biochem. Biophys. Res. Commun.* **347**:1113.**Sample(s) Tested:** human aortic smooth muscle cells**Application: Immunohistochemistry****Product:** Human CXCR6 Monoclonal
Catalog # MAB699**Reference(s):**Ruth, J.H. *et al.* (2006) CXCL16-mediated cell recruitment to rheumatoid arthritis synovial tissue and murine lymph nodes is dependent upon the MAPK pathway. *Arthritis Rheum.* **54**:765.**Sample(s) Tested:** human synovial tissue

Dectin-1/CLEC7A

Application: Flow Cytometry**Product:** Human Dectin-1/CLEC7A Polyclonal
Catalog # AF1859**Reference(s):**Meyer-Wentrup, F. *et al.* (2007) Dectin-1 interaction with tetraspanin CD37 inhibits IL-6 production. *J. Immunol.* **178**:154.**Sample(s) Tested:** human macrophages and dendritic cells**Application: Immunohistochemistry****Product:** Mouse Dectin-1/CLEC7A Polyclonal
Catalog # AF1756**Reference(s):**Rappleye, C.A. *et al.* (2007) Histoplasma capsulatum α -1,3-glucan blocks innate immune recognition by the β -glucan receptor. *Proc. Natl. Acad. Sci. U.S.A.* **104**:1366.**Sample(s) Tested:** mouse 3T3 fibroblasts and P388D1 macrophages transfected with mouse Dectin-1

Molecule	Monoclonal Antibodies	Polyclonal Antibodies	Biotinylated Antibodies	Fluorochrome-labeled Antibodies
CXCL16	H M	H M	H M	H
CXCR1/IL-8 RA	H			H
CXCR2/IL-8 RB	H M			H M
CXCR3	H M			H M
CXCR4	H M		H	H M
CXCR5	H		H	H
CXCR6	H M			H M
CXCR7/RDC-1	H			
D6	H			H
DC-LAMP		H		
DC-SIGN	H			H
DC-SIGNR/CD299	H			H
DCAR	M	M		
DCIR/CLEC4A	H	H	H	H
DEC-205		H	H	
Dectin-1/CLEC7A	H M	H M	H	
Dectin-2/CLEC6A	M	H M	M	
DEP-1/CD148	H	H M R		H
DLEC/CLEC4C/BDCA2		H	H	
DNAM-1	H	H	H	H
DPPIV/CD26	H M	H M	H M	H M
ECF-L/CHI3L3	M	M	M	
EMMPRIN/CD147	H M	H M	H M	
Endoglin/CD105	H M	H M	H M	H M
Endothelin-1	H			
EphB6	M	M	M	
Fas/TNFRSF6	H M	H M R F	H M R F	H
Fcγ RI/CD64	H M	H M	H M	H
Fcγ RIIA/CD32a	H M	H M	M	H M
Fcγ RIIB/CD32b	H	H M	H	H M
Fcγ RIIC/CD32c	H		H	
Fcγ RIIC/CD16	H M	H M	H M	M
FcRH1/IRTA5	H	H	H	
FcRH2/IRTA4		H	H	
FcRH4/IRTA1	H	H	H	
FcRH5/IRTA2	H	H	H	
FoxP3		H	H	
FPR1	H			
FPRL1	H			H
FPRL2	H			
G-CSF R	H	H		H
GATA-3	H M	H	H	
GITR/TNFRSF18	H M	H M	H M	H M
GITR Ligand/TNFSF18	H M	H M	H M	H
Glycophorin A	H		H	H

Dectin-1/CLEC7A Continued

Application: Immunoprecipitation

Product: Human Dectin-1/CLEC7A Monoclonal Catalog # MAB1859

Reference(s):

Meyer-Wentrup, F. *et al.* (2007) Dectin-1 interaction with tetraspanin CD37 inhibits IL-6 production. *J. Immunol.* **178**:154.

Sample(s) Tested: human HEK293 embryonic kidney cells transfected with Dectin-1-HA and Raji B cell line (with endogenous Dectin-1)

EMMPRIN/CD147

Application: Immunoprecipitation

Product: Human EMMPRIN Polyclonal Catalog # AF972

Reference(s):

Pushkarsky, T. *et al.* (2001) CD147 facilitates HIV-1 infection by interacting with virus-associated cyclophilin A. *Proc. Natl. Acad. Sci. U.S.A.* **98**:6360.

Sample(s) Tested: human peripheral blood mononuclear cells

Application: Western Blot

Product: Human EMMPRIN Monoclonal Catalog # MAB972

Reference(s):

Hagemann, T. *et al.* (2005) Macrophages induce invasiveness of epithelial cancer cells via NF-kappa B and JNK. *J. Immunol.* **175**:1197.

Sample(s) Tested: human IGROVE1 ovarian carcinoma, MCF-7 breast cancer cell lines, and IGROVE1 or MCF-7 cells co-cultured with macrophages

GITR/TNFRSF18

Application: Flow Cytometry

Product: Mouse GITR/TNFRSF18 Biotin Polyclonal Catalog # BAF524

Reference(s):

Esparza, E.M. *et al.* (2006) Tumor necrosis factor receptor TNFR-associated factor 5 is a critical intermediate of costimulatory signaling pathways triggered by glucocorticoid-induced TNFR in T cells. *J. Biol. Chem.* **281**:8559.

Sample(s) Tested: mouse splenocytes

Tone, M. *et al.* (2003) Mouse glucocorticoid-induced tumor necrosis factor receptor ligand is costimulatory for T cells. *Proc. Natl. Acad. Sci. U.S.A.* **100**:15059.

Sample(s) Tested: mouse bone marrow-derived dendritic cells

Product: Mouse GITR/TNFRSF18 Monoclonal
Catalog # MAB5241

Reference(s):

Ji, H.B. *et al.* (2004) Cutting edge: the natural ligand for glucocorticoid-induced TNF receptor-related protein abrogates regulatory T cell suppression. *J. Immunol.* **172**:5823.
Sample(s) Tested: mouse T cells and human 293T embryonic kidney cell line transfected with mouse GITR

Application: Neutralization

Product: Mouse GITR/TNFRSF18 Polyclonal
Catalog # AF524

Reference(s):

Ronchetti, S. *et al.* (2004) GITR, a member of the TNF receptor superfamily, is costimulatory to mouse T lymphocyte subpopulations. *Eur. J. Immunol.* **34**:613.
Sample(s) Tested: mouse T cells

GITR Ligand/TNFSF18

Application: Flow Cytometry

Product: Mouse GITR Ligand/TNFSF18
Biotin Polyclonal
Catalog # BAF2177

Reference(s):

La Cava, A. *et al.* (2004) Ig-reactive CD4⁺CD25⁺ T cells from tolerized New Zealand Black x New Zealand WhiteF1 mice suppress *in vitro* production of antibodies to DNA. *J. Immunol.* **173**:3542.
Sample(s) Tested: mouse splenocytes

Application: Immunohistochemistry

Product: Human GITR Ligand/TNFSF18
Fluorescein Monoclonal
Catalog # FAB6941F

Reference(s):

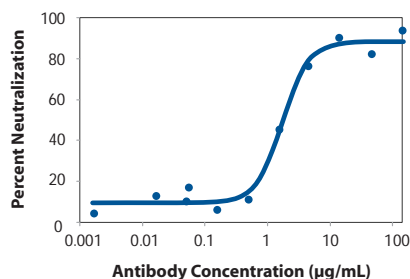
Hanabuchi, S. *et al.* (2006) Human plasmacytoid dendritic cells activate NK cells through glucocorticoid-induced tumor necrosis factor receptor-ligand GITR. *Blood* **107**:3617.
Sample(s) Tested: mouse tonsil

Application: Neutralization

Product: Human GITR Ligand/TNFSF18
Monoclonal
Catalog # MAB6941

Reference(s):

Cardona, I.D. *et al.* (2006) Staphylococcal enterotoxin B inhibits regulatory T cells by inducing glucocorticoid-induced TNF receptor-related protein ligand on monocytes. *J. Allergy Clin. Immunol.* **117**:688.
Sample(s) Tested: human T cells



Neutralization of GITR Ligand Activity. Neutralization of the stimulatory activity of recombinant mouse GITR Ligand (Catalog # 2177-GL) on CD4⁺ T cell growth was achieved using rat anti-mouse GITR Ligand/TNFSF18 monoclonal antibody (Catalog # MAB2177). Following incubation of GITR Ligand with various concentrations of the antibody and the addition of mouse CD4⁺ T cells, Resazurin (Catalog # AR002) was added to quantitate cell growth as measured by relative fluorescence.

GM-CSF

Application: Multiplex Development

Product: Human GM-CSF Monoclonal
Catalog # MAB615

Reference(s):

Lisco, A. *et al.* (2007) Viral interactions in human lymphoid tissue: Human herpesvirus 7 suppresses the replication of CCR5-tropic human immunodeficiency virus type 1 via CD4 modulation. *J. Virol.* **81**:708.
Sample(s) Tested: human tonsil tissue explant

gp130

Application: ELISA Development

Product: Human gp130 Biotin Polyclonal
Catalog # BAF228

Reference(s):

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 auto-antibody

Application: Flow Cytometry

Product: Human gp130 PE Monoclonal
Catalog # FAB228P

Reference(s):

Mahboubi, K. *et al.* (2003) Desensitization of signaling by oncostatin M in human vascular cells involves cytoplasmic Tyr residue 759 in gp130 but is not mediated by either Src homology 2 domain-containing tyrosine phosphatase 2 or suppressor of cytokine signaling 3. *J. Biol. Chem.* **278**:25014.
Sample(s) Tested: human umbilical vein endothelial cells

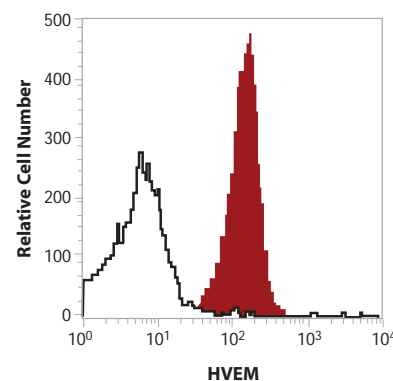
HVEM/TNFRSF14

Application: Cell-based ELISA Development

Product: Human HVEM/TNFRSF14
Polyclonal
Catalog # AF356

Reference(s):

Struyf, F. *et al.* (2002) Search for polymorphisms in the genes for herpesvirus entry mediator, nectin-1, and nectin-2 in immune seronegative individuals. *J. Infect. Dis.* **185**:36.
Sample(s) Tested: human lymphoblastoid cells



Detection of HVEM by Flow Cytometry. Human peripheral blood mononuclear cells were stained using APC-conjugated mouse anti-human HVEM monoclonal antibody (Catalog # FAB356A; filled histogram). Staining with an APC-conjugated isotype control (Catalog # IC002A; open histogram) highlights the specificity of the HVEM antibody.

ICAM-1/CD54

Application: ELISA Development

Product: Human ICAM-1/CD54 Monoclonal
Catalog # BBA3

Reference(s):

Yamamoto, H. *et al.* (2005) CC chemokines and transmigration of eosinophils in the presence of vascular cell adhesion molecule 1. *Ann. Allergy. Asthma. Immunol.* **94**:292.
Sample(s) Tested: human pulmonary microvascular endothelial cells

Application: Flow Cytometry

Product: Human ICAM-1/CD54 Monoclonal
Catalog # MAB720

Reference(s):

Lee, J.H. *et al.* (2004) Intercellular adhesion molecule-1 mediates cellular cross-talk between parenchymal and immune cells after lipopolysaccharide neutralization. *J. Immunol.* **172**:608.
Sample(s) Tested: human A549 alveolar epithelial cell line

Molecule	Monoclonal Antibodies	Polyclonal Antibodies	Biotinylated Antibodies	Fluorochrome-labeled Antibodies
GM-CSF	H M R F P	H M R Ca F P	H M R Ca F P	H
GM-CSF R α	H	H	H	H
gp130	H M	H M	H M	H
Gr-1/Ly-6G	M		M	M
Granulysin		H		
Granzyme A	H			
Granzyme B	M	H M	H M	
Granzyme D	M	M	M	
Granzyme G	M	M	M	
Granzyme H	H	H	H	
H60	M	M	M	M
Hck	H M			
HCR/CRAM-A/B	H			
Hemoglobin		H		
HM74A/GPR109A	H			H
HVEM/TNFRSF14	H	H M	H	H
ICAM-1/CD54	H M R	H M R	H M R	H R
ICAM-2/CD102	H	H M	H M	
ICOS		H M	H	
IFN- γ	H M R B Ca CR P	H M R B Ca CR E F P Pr	H M R B Ca CR F P Pr	H M B
IFN- γ R1	H M	H M	H	H
IFN- γ R2	M	H M	H M	
IgG	please see page 23			
IgM		H		
IGSF8		M	M	
IgY			Ch	
IL-1 RI	H M	H M	H M	
IL-1 RII	H M	H M	H M	
IL-1 R4/ST2	H M	H M	H M	
IL-2	H R CR P	H M R B Ca CR E F P	H M R B Ca CR E F P	H M P
IL-2 R α	H M	H M	H M	H M
IL-2 R β	H M	H M	H	H M
IL-3	H M	H M R	H M R	H
IL-3 R α	H M	H M	H M	H M
IL-3 R β	M	M	M	M
IL-4	H M R Ca CR F P	H M R B Ca CR E F P	H M R Ca CR F P	H M
IL-4 R	H M	H M	H M	H
IL-5	M R	H M R Ca E F P	H M R	H M
IL-5 R α	H	H M	H M	
IL-6	H M R Ca CR F P	H M R Ca CR E F P	H M R Ca CR E P	H M
IL-6 R	H M	H M	H M	
IL-7	H M	H M	H M	
IL-7 R α /CD127	H M	H M	H M	H
IL-10	H M R Ca CR F P V	H M R Ca CR E F P V	H M R Ca CR F P V	H

IL-4 R

Application: Neutralization

Product: Human IL-4 R Monoclonal
Catalog # MAB230

Reference(s):

Jakubzick, C. *et al.* (2004) Human pulmonary fibroblasts exhibit altered interleukin-4 and interleukin-13 receptor subunit expression in idiopathic interstitial pneumonia. *Am. J. Pathol.* **164**:1989.

Sample(s) Tested: human fibroblasts

IL-6 R

Application: In Vivo

Product: Mouse IL-6 R Polyclonal
Catalog # AF1830

Reference(s):

Kurooka, M. & Y. Kaneda. (2007) Inactivated Sendai virus particles eradicate tumors by inducing immune responses through blocking regulatory T cells. *Cancer Res.* **67**:227.

Sample(s) Tested: mouse

Application: Western Blot

Product: Human IL-6 R Monoclonal
Catalog # MAB227

Reference(s):

Ammit, A.J. *et al.* (2007) Effect of IL-6 trans-signaling on the pro-remodeling phenotype of airway smooth muscle. *Am. J. Physiol. Lung Cell Mol. Physiol.* **292**:L199.

Sample(s) Tested: human primary lung fibroblasts and airway smooth muscle cells

IL-7 R α /CD127

Application: Flow Cytometry

Product: Human IL-7 R α /CD127 Polyclonal
Catalog # AF-306-PB

Reference(s):

Kim, H.R. *et al.* (2006) Altered IL-7R α expression with aging and the potential implications of IL-7 therapy on CD8⁺ T cell immune responses. *Blood* **107**:2855.

Sample(s) Tested: human peripheral blood mononuclear cells

Application: Western Blot

Product: Human IL-7 R α /CD127 Polyclonal
Catalog # AF-306-PB

Reference(s):

Dus, D. *et al.* (2003) IL-7 receptor is present on human microvascular endothelial cells. *Immunol. Lett.* **86**:163.

Sample(s) Tested: human HLMEC, HAPEC.s1, HPLNEC.b3, HPLNEC.s1r1, and HPLNEC.MEL endothelial cell lines

IL-10 R α

Application: Flow Cytometry

Product: Human IL-10 R α Monoclonal
Catalog # MAB274

Reference(s):

Akasaki, Y. *et al.* (2004) Induction of a CD4⁺T regulatory type 1 response by cyclooxygenase-2-overexpressing glioma. *J. Immunol.* **173**:4352.

Sample(s) Tested: human V-87MG, LN-18, and MG-37 glioma cell lines

Application: Immunoprecipitation

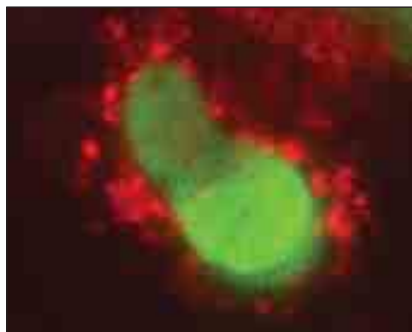
Product: Mouse IL-10 R α Polyclonal
Catalog # AF-474-NA

Reference(s):

Yasukawa, H. *et al.* (2003) IL-6 induces an anti-inflammatory response in the absence of SOCS3 in macrophages. *Nat. Immunol.* **4**:551.

Sample(s) Tested: mouse SOCS3^{-/-} neutrophils and macrophages

Application: Immunohistochemistry



IL-10 R α in Peripheral Blood Mononuclear Cells (PBMC). IL-10 R α was detected in human PBMC with anti-human IL-10 R α polyclonal antibody (Catalog # AF274). Cells were stained using a Rhodamine Red X-conjugated anti-goat IgG secondary antibody and counterstained with FluoroNissl Green.

IL-10 R β

Application: Neutralization

Product: Human IL-10 R β Polyclonal
Catalog # AF874

Reference(s):

Sheppard, P. *et al.* (2003) IL-28, IL-29 and their class II cytokine receptor IL-28R. *Nat. Immunol.* **4**:63.

Sample(s) Tested: human 293 embryonic kidney cells

IL-12/IL-23 p40

Application: Immunoprecipitation

Product: Mouse IL-12/IL-23 p40 Monoclonal
Catalog # MAB499

Reference(s):

Ha, S.J. *et al.* (2004) IL-23 induces stronger sustained CTL and Th1 immune responses than IL-12 in hepatitis C virus envelope protein 2 DNA immunization. *J. Immunol.* **172**:525.

Sample(s) Tested: monkey COS-7 SV40-transformed kidney fibroblasts transfected with mouse IL-12

IL-13 R α 1

Application: Flow Cytometry

Product: Human IL-13 R α 1 Monoclonal
Catalog # MAB146

Reference(s):

Spencer, L.A. *et al.* (2006) Cytokine receptor-mediated trafficking of preformed IL-4 in eosinophils identifies an innate immune mechanism of cytokine secretion. *Proc. Natl. Acad. Sci. U.S.A.* **103**:3333.

Sample(s) Tested: human eosinophils

Application: Immunohistochemistry

Product: Human IL-13 R α 1 Polyclonal
Catalog # AF152

Reference(s):

Lama, V.N. *et al.* (2006) Obligatory role for interleukin-13 in obstructive lesion development in airway allografts. *Am. J. Pathol.* **169**:47.

Sample(s) Tested: human bronchial tissue

IL-13 R α 2

Application: Immunoprecipitation

Product: Human IL-13 R α 2 Polyclonal
Catalog # AF146

Reference(s):

Trieu, Y. *et al.* (2004) Soluble interleukin-13R α 2 decoy receptor inhibits Hodgkin's lymphoma growth *in vitro* and *in vivo*. *Cancer Res.* **64**:3271.

Sample(s) Tested: monkey COS-7 SV40-transformed kidney fibroblasts cells transfected with human IL-13 R α 2

IL-17

Application: Immunohistochemistry

Product: Human IL-17 Biotin Polyclonal
Catalog # BAF317

Reference(s):

Page, G. *et al.* (2004) Plasma cell-like morphology of Th1-cytokine-producing cells associated with the loss of CD3 expression. *Am. J. Pathol.* **164**:409.

Sample(s) Tested: human lymph node cells and synovial tissue

Application: In Vivo

Product: Mouse IL-17 Monoclonal
Catalog # MAB421

Reference(s):

Lohr, J. *et al.* (2006) Role of IL-17 and regulatory T lymphocytes in a systemic autoimmune disease. *J. Exp. Med.* **203**:2785.

Sample(s) Tested: mouse

Application: Western Blot

Product: Human IL-17 Biotin Polyclonal
Catalog # BAF317

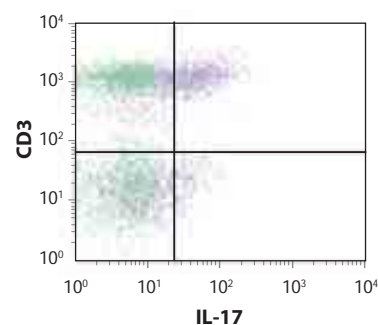
Reference(s):

Takahashi, K. *et al.* (2005) The potential role of interleukin-17 in the immunopathology of periodontal disease. *J. Clin. Periodontol.* **32**:369.

Sample(s) Tested: human gingival explant

Application: Flow Cytometry

Product: Human IL-17 APC
Catalog # IC3171A



Detection of Intracellular IL-17 by Flow Cytometry.

Untreated (green) and PMA/ionomycin-stimulated (purple) human PBMC were stained using PE-conjugated mouse anti-human CD3 antibody (Catalog # FAB100P) and APC-conjugated mouse anti-human IL-17 (Catalog # IC3171A).

Molecule	Monoclonal Antibodies	Polyclonal Antibodies	Biotinylated Antibodies	Fluorochrome-labeled Antibodies
IL-10 R α	H M	H M	H M	H
IL-10 R β	H	H	H	H
IL-12	H	H M R P	H M	H
IL-12/IL-23 p40	H	Ca F	M	
IL-12 R β 1	H	H M	H M	H
IL-12 R β 2	H	H	H	H
IL-13	H M R	H M R	H M R	H
IL-13 R α 1	H	H	H	
IL-13 R α 2	H M	H M	H M	
IL-15	H M	H M	H M	H
IL-15 R α	H M	H M	H M	
IL-17	H M	H M	H M	H
IL-17 R	H M	H M	H M	H
IL-17 RC		H M	H M	
IL-17 RD	H	H M	H M	H
IL-17B	H	H M	H M	
IL-17B R	H M	H M	H M	
IL-17C	H M	H M	H	
IL-17D	H M	H M	H M	
IL-17E	H M	H M	H M	
IL-17F	H M	H M	H M	
IL-18/IL-1F4	H M R Ca	R Ca P Pr	H M R P	
IL-18 R α /IL-1 R5	H M	H M	H M	H
IL-18 R β /IL-1 R7	H	H M	H M	
IL-19	H M	H	H	
IL-20	H M	H M	H	
IL-20 R α	H M	H M	H M	H
IL-20 R β		H	H	
IL-21	M	M	M	
IL-21 R	H M	H M	H M	H M
IL-22	H M	H M	H M	H
IL-22 R	H	H	H	
IL-22 BP	H	H M	H	
IL-23	M	H M		
IL-23 R	M	H M	H M	H
IL-24	H	H M	H M	
IL-26/AK155	H	H	H	
IL-27	M	H M	H M	
IL-28 A	H	H	H	
IL-28 B	M	M	M	
IL-29/IFN- λ 1	H	H	H	
IL-31	H M	H M	H M	
IL-31 RA		H M	H M	
IL-32 α	H	H	H	
IL-33	H M	H M		

IL-17 R

Application: Flow Cytometry

Product: Human IL-17 R Biotin Polyclonal
Catalog # BAF177

Reference(s):

Ciree, A. *et al.* (2004) Expression and activity of IL-17 in cutaneous T-cell lymphomas mycosis fungoides and Sezary syndrome. *Int. J. Cancer* **112**:113.
Sample(s) Tested: human SeAX and Myla sezary T cell lines

Application: Neutralization

Product: Human IL-17 R Polyclonal
Catalog # AF177

Reference(s):

Kao, C.Y. *et al.* (2004) IL-17 markedly up-regulates β -defensin-2 expression in human airway epithelium via JAK and NF- κ B signaling pathways. *J. Immunol.* **173**:3482.

Sample(s) Tested: human tracheobronchial epithelial cells

IL-17B R

Application: Western Blot

Product: Human IL-17B R Monoclonal
Catalog # MAB1207

Reference(s):

Letuve, S. *et al.* (2006) IL-17E upregulates the expression of proinflammatory cytokines in lung fibroblasts. *J. Allergy Clin. Immunol.* **117**:590.

Sample(s) Tested: human fibroblasts

Product: Human IL-17B R Polyclonal
Catalog # AF1207

Reference(s):

Wong, C.K. *et al.* (2005) Interleukin-25-induced chemokines and interleukin-6 release from eosinophils is mediated by p38 mitogen-activated protein kinase, c-Jun N-terminal kinase, and nuclear factor- κ B. *Am. J. Respir. Cell Mol. Biol.* **33**:186.

Sample(s) Tested: human eosinophils

IL-18 R α /IL-1 R5

Application: Flow Cytometry

Product: Mouse IL-18 R α /IL-1 R5 Polyclonal
Catalog # AF856

Reference(s):

Vesosky, B. *et al.* (2006) Th1 cytokines facilitate CD8 T cell-mediated early resistance to infection with *Mycobacterium tuberculosis* in old mice. *Infect. Immun.* **74**:3314.

Sample(s) Tested: mouse single-cell suspension of lung

Product: Human IL-18 R α /IL-1 R5
PE Monoclonal
Catalog # FAB840P

Reference(s):

Pages, F. *et al.* (2005) Epstein-Barr virus nuclear antigen 2 induces interleukin-18 receptor expression in B cells. *Blood* **105**:1632.

Sample(s) Tested: human DG75, BL2, BL30, BL31, BL41, BL70, P3HR-1, B95-8, BL2-P3, BL41-P3, BL2-B95, BL30-B95, BL31-B95, BL41-B95, and BL70-B95 Burkitt's lymphoma cell lines

Application: Immunohistochemistry

Product: Mouse IL-18 R α /IL-1 R5 Polyclonal
Catalog # AF856

Reference(s):

Hedtjarn, M. *et al.* (2005) White matter injury in the immature brain: role of interleukin-18. *Neurosci. Lett.* **373**:16.

Sample(s) Tested: mouse brain

Application: Western Blot

Product: Human IL-18 R α /IL-1 R5 Polyclonal
Catalog # AF840

Reference(s):

Felderhoff-Mueser, U. *et al.* (2005) Caspase-1-processed interleukins in hyperoxia-induced cell death in the developing brain. *Ann. Neurol.* **57**:50.

Sample(s) Tested: rat brain

Product: Mouse IL-18 R α /IL-1 R5 Polyclonal
Catalog # AF856

Reference(s):

Kataoka, T.R. *et al.* (2005) Involvement of connective tissue-type mast cells in Th1 immune responses via Stat4 expression. *Blood* **105**:1016.

Sample(s) Tested: mouse mast cells

IL-18/IL-1F4

Application: ELISA Development

Product: Human IL-18/IL-1F4
Biotin Monoclonal
Catalog # D045-6

Reference(s):

Kelly, A.M. *et al.* (2006) Changes in hepatic immunoregulatory cytokines in patients with metastatic colorectal carcinoma: implications for hepatic anti-tumour immunity. *Cytokine* **35**:171.

Sample(s) Tested: human liver

Application: Immunohistochemistry

Product: Human IL-18/IL-1F4 Monoclonal
Catalog # D043-3

Reference(s):

te Velde, A.A. *et al.* (2003) Increased expression of DC-SIGN⁺IL-12⁺IL-18⁺ and CD83⁺IL-12-IL-18- dendritic cell populations in the colonic mucosa of patients with Crohn's disease. *Eur. J. Immunol.* **33**:143.

Sample(s) Tested: human colon

Product: Human IL-18/IL-1F4 Monoclonal
Catalog # D044-3

Reference(s):

Ledee-Bataille, N. *et al.* (2005) Role of the endometrial tripod interleukin-18, -15, and -12 in inadequate uterine receptivity in patients with a history of repeated *in vitro* fertilization-embryo transfer failure. *Fertil. Steril.* **83**:598.

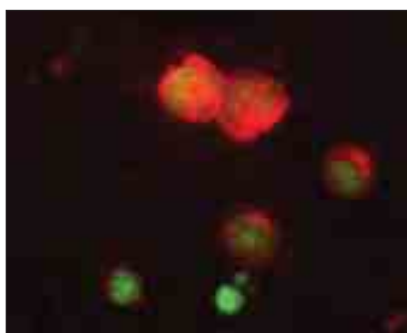
Sample(s) Tested: human endometrium

Product: Rat IL-18/IL-1F4 Polyclonal
Catalog # AF521

Reference(s):

Jander, S. *et al.* (2002) Interleukin-18 expression after focal ischemia of the rat brain: association with the late-stage inflammatory response. *J. Cereb. Blood Flow Metab.* **22**:62.

Sample(s) Tested: rat brain



IL-18 in Peripheral Blood Mononuclear Cells (PBMC). IL-18 was detected in human PBMC with anti-rat IL-18 polyclonal antibody (Catalog # AF521). Cells were stained using a Rhodamine Red X-conjugated anti-goat IgG secondary antibody and counterstained with FluoroNissl Green.

IL-23 R

Application: Neutralization

Product: Mouse IL-23 R Polyclonal
Catalog # AF1686

Reference(s):

Belladonna, M.L. *et al.* (2006) IL-23 neutralization protects mice from Gram-negative endotoxic shock. *Cytokine* **34**:161.

Sample(s) Tested: mouse macrophages

ILT3/CD85k

Application: Neutralization

Product: Human ILT3/CD85k Polyclonal
Catalog # AF2425

Reference(s):

Gleissner, C.A. *et al.* (2007) IL-10 inhibits endothelium-dependent T cell costimulation by up-regulation of ILT3/4 in human vascular endothelial cells. *Eur. J. Immunol.* **37**:177.

Sample(s) Tested: human umbilical vein endothelial and T cell co-culture

Integrin α 4/CD49d

Application: Flow Cytometry

Product: Human Integrin α 4/CD49d
Biotin Monoclonal
Catalog # BAM1354

Reference(s):

Ornatsky, O. *et al.* (2006) Multiple cellular antigen detection by ICP-MS. *J. Immunol. Methods* **308**:68.

Sample(s) Tested: human MBA-4 megakaryocyte cell line

Integrin α M/CD11b

Application: Immunoprecipitation

Product: Mouse Integrin α M/CD11b
Monoclonal
Catalog # MAB1124

Reference(s):

Spijkers, P.P. *et al.* (2005) LDL-receptor-related protein regulates β 2-integrin-mediated leukocyte adhesion. *Blood* **105**:170.

Sample(s) Tested: human U937 leukemic monocyte lymphoma cell line

Leukotriene B4 R1

Application: Flow Cytometry

Product: Human Leukotriene B4 R1
PE Monoclonal
Catalog # FAB099P

Reference(s):

Sabirsh, A. *et al.* (2006) Residues from transmembrane helices 3 and 5 participate in leukotriene B4 binding to BLT1. *Biochemistry.* **45**:5733.

Sample(s) Tested: human HeLa cervical adenocarcinoma cell line

LIGHT/TNFSF14

Application: Flow Cytometry

Product: Human LIGHT/TNFSF14 Polyclonal
Catalog # AF664

Reference(s):

Chang, Y.C. *et al.* (2004) Modulation of macrophage differentiation and activation by decoy receptor 3. *J. Leukoc. Biol.* **75**:486.

Sample(s) Tested: human monocytes

Molecule	Monoclonal Antibodies	Polyclonal Antibodies	Biotinylated Antibodies	Fluorochrome-labeled Antibodies
ILT2/CD85j	H	H	H	H
ILT3/CD85k	H	H	H	H
ILT4/CD85d	H	H	H	H
ILT5/CD85a	H			H
ILT6/CD85e	H			
Integrin α 2/CD49b	H M	M	H M	H M
Integrin α 2B/CD41	M			
Integrin α 4/CD49d	H M		H	H
Integrin α 5/CD49e	H M	H M	H M	H M
Integrin α 6/CD49f	H M B			H M B
Integrin α E/CD103	M	M	M	
Integrin α M/CD11b	H M	H	H M	H M
Integrin α X/CD11c	H			H
Integrin β 1/CD29	H M	H M	H	H
Integrin β 2/CD18	H	H M	H	H
Integrin β 3/CD61	H	H	H	H
KC	M	M	M	
KIR/CD158	H			H
KIR2DL1	H			H
KIR2DL3	H			H
KIR2DL4/CD158d	H			
KIR2DS4	H			
KIR3DL1	H			H
KLF6		H		
LAG-3	H	H M	H	
LAIR1	H	H	H	H
LAIR2	H	H	H	
Langerin	H	H	H	
Latexin		M		
Lck	H			
LDL R	M	H M	H M	
Leptin R	H M	H M	H M	H
Leukotriene B4 R1	H			H
LIGHT/TNFSF14	H M	H M	H M	H
LILRC1		R		
LIMPII/SR-B2	M	H M	H M	
LIR-6	H			
LIR-8/CD85c	H	H		
LIX	M R	M R	M R	
LMIR1/CD300A	H			
LMIR2/CD300c		H	H	
LMIR3/CD300LF	H M	H M		
LMIR5/CD300LB	M	H M	M	
LMIR6/CD300LE	H	H	H	
LOX-1/SR-E1	H M	H M	H M	

MICA

Application: Flow Cytometry

Product: Human MICA/B Monoclonal
Catalog # MAB13001

Reference(s):

Skov, S. *et al.* (2005) Cancer cells become susceptible to natural killer cell killing after exposure to histone deacetylase inhibitors due to glycogen synthase kinase-3-dependent expression of MHC class I-related chain A and B
Cancer Res. **65**:11136.

Sample(s) Tested: human Jurkat leukemic T cell line and BLASTS from PBL

NKG2A

Application: Flow Cytometry

Product: Human NKG2A Monoclonal
Catalog # MAB1059

Reference(s):

Arlettaz, L. *et al.* (2004) Activating CD94:NKG2C and inhibitory CD94:NKG2A receptors are expressed by distinct subsets of committed CD8⁺ TCR $\alpha\beta$ lymphocytes. Eur. J. Immunol. **34**:3456.

Sample(s) Tested: human mononuclear cells

NKG2C

Application: Flow Cytometry

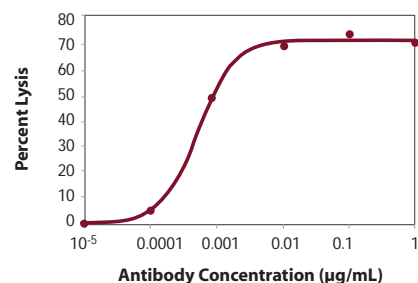
Product: Human NKG2C PE Monoclonal
Catalog # FAB138P

Reference(s):

Ortega, C. *et al.* (2004) Role for NKG2-A and NKG2-C surface receptors in chronic CD4⁺ T-cell responses. Immunol. Cell Biol. **82**:587.

Sample(s) Tested: human T cells

Application: Functional Assay



NKG2C-Mediated Lysis of P815 Target Cells.

Peripheral blood NK cells were sorted by flow cytometry (CD19⁻, CD3⁺, CD158b⁺) and cultured in the presence of irradiated MM-170 malignant melanoma cells and IL-2. The resulting population was entirely NKG2C positive and did not express NKG2A. The redirected lysis of Fc-bearing mouse mastocytoma P815 target cells was tested at the indicated concentrations of anti-human NKG2C monoclonal antibody (Catalog # MAB1381) in a ⁵¹Cr-release assay.

NKG2D

Application: Flow Cytometry

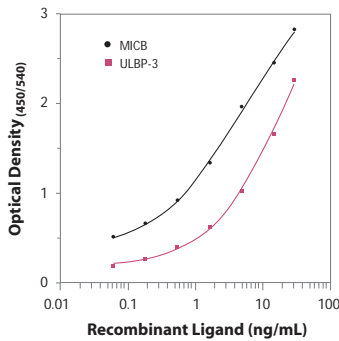
Product: Mouse NKG2D Biotin Monoclonal
Catalog # BAM1547

Reference(s):

Ogasawara, K. *et al.* (2004) NKG2D blockade prevents autoimmune diabetes in NOD mice. *Immunity* **20**:757.

Sample(s) Tested: mouse T cells

Application: Binding Assay



NKG2D Binding Ligands MICB and ULBP-3.

Recombinant human NKG2D/Fc (Catalog # 1299-NK) was immobilized in a microtiter plate. After blocking, recombinant MICB/Fc (Catalog # 1599-MB) or ULBP-3/Fc (Catalog # 1517-UL) was added at the indicated concentrations. Ligand binding was detected with biotinylated polyclonal antibodies specific for MICB (Catalog # BAF1599) or ULBP-3 (Catalog # BAF1517).

Product: Human NKG2D PE Monoclonal
Catalog # FAB139P

Reference(s):

Markel, G. *et al.* (2004) The mechanisms controlling NK cell autoreactivity in TAP2-deficient patients. *Blood* **103**:1770.

Sample(s) Tested: human natural killer cells

Application: Immunohistochemistry

Product: Mouse NKG2D Biotin Monoclonal
Catalog # BAM1547

Reference(s):

Ogasawara, K. *et al.* (2004) NKG2D blockade prevents autoimmune diabetes in NOD mice. *Immunity* **20**:757.

Sample(s) Tested: mouse pancreas

NKp46/NCR1

Application: Activation

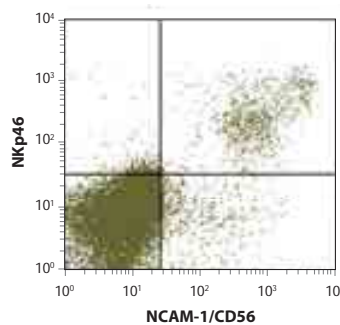
Product: Human NKp46/NCR1 Monoclonal
Catalog # MAB1850

Reference(s):

Nolte-'t Hoen, E.N. *et al.* (2007) Increased surveillance of cells in mitosis by human NK cells suggests a novel strategy for limiting tumor growth and viral replication. *Blood* **109**:670.

Sample(s) Tested: human peripheral natural killer cells

Application: Flow Cytometry



Detection of NCAM-1⁺NKp46⁺ Human Peripheral Blood Mononuclear Cells (PBMC) by Flow Cytometry.

Human PBMC were double-stained with APC-conjugated mouse anti-human NKp46 monoclonal antibody (Catalog # FAB1850A) and PE-conjugated mouse anti-human NCAM-1/CD56 monoclonal antibody (Catalog # FAB2408P).

OX40 Ligand/TNFSF4

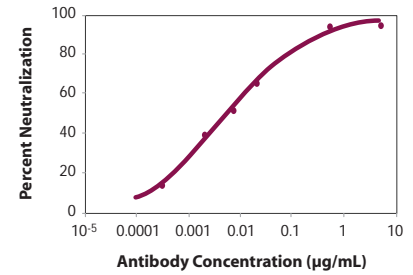
Application: Neutralization

Product: Human OX40 Ligand/TNFSF4
Monoclonal
Catalog # MAB10541

Reference(s):

Godfrey, W.R. *et al.* (2005) Cord blood CD4⁽⁺⁾CD25⁽⁺⁾-derived T regulatory cell lines express FoxP3 protein and manifest potent suppressor function. *Blood* **105**:750.

Sample(s) Tested: human antigen-presenting cells and T cells



Neutralization of OX40 Ligand Activity. Mouse anti-human OX40 Ligand monoclonal antibody (Catalog # MAB10541) neutralizes the stimulatory activity of recombinant human OX40 Ligand (Catalog # 1054-OX) on human peripheral blood mononuclear cells proliferation. Cell proliferation was measured by ³H-thymidine incorporation.

PD-1

Application: ELISA Development

Product: Human PD-1 Polyclonal
Catalog # AF1086

Reference(s):

Wan, B. *et al.* (2006) Aberrant regulation of synovial T cell activation by soluble costimulatory molecules in rheumatoid arthritis. *J. Immunol.* **177**:8844.

Sample(s) Tested: human serum and synovial fluid

PDGF R α

Application: Flow Cytometry

Product: Human PDGF R α Monoclonal
Catalog # MAB322

Reference(s):

Naginei, C.N. *et al.* (2005) Expression of PDGF and their receptors in human retinal pigment epithelial cells and fibroblasts: regulation by TGF- β . *J. Cell. Physiol.* **203**:35.

Sample(s) Tested: human retinal pigment epithelial and choroidal fibroblast cells

Application: Immunohistochemistry

Product: Human PDGF R α Monoclonal
Catalog # MAB322

Reference(s):

Luyt, K. *et al.* (2004) Metabotropic glutamate receptors are expressed in adult human glial progenitor cells. *Biochem. Biophys. Res. Commun.* **319**:120.

Sample(s) Tested: human hippocampal neurons, glial progenitor cells, HeLa cervical adenocarcinoma, and HEK293 embryonic kidney cell lines

Molecule	Monoclonal Antibodies	Polyclonal Antibodies	Biotinylated Antibodies	Fluorochrome-labeled Antibodies
M-CSF R	H	H M	H	H
MAG/Siglec-4a	R	R	R	
MARCO		M	M	
MCK-2		V		
MCP-6	M			
MCP-11		M	M	
MD-1	H M	H M	H M	
MD-2	H	H	H	
MDL-1/CLEC5A	H M	H M	H M	M
MGL2		M	M	
MICA	H	H	H	H
MICB	H	H	H	H
MIP-2	M	M	M	
MMR	H M	H M	H M	
MS4A1/CD20	H			
MULT-1	M			
NCAM-1/CD56		H	H	H
NCAM-L1	H	H	H	
Nectin-2/CD112		H		
Nepilysin/CD10	H M	H M	H M	
Neuropilin-1	R	R	R	
NFAM1	H			
NKG2A	H			H
NKG2C	H			H
NKG2D	H M		M	H M
NKp30	H	H	H	H
NKp44	H	H	H	
NKp46/NCR1	H M	H M	M	H
NKp80/KLRF1	H	H	H	H
NTB-A/SLAMF6	H	H M	H	H
OCIL/CLEC2d		H M	M	
OCILRP2/CLEC2i		M	M	
Osteoactivin/GPNMB	H M	H M	H	
Osteopontin	H	H M	H M	
OX40/TNFRSF4		H M	H M	
OX40 Ligand/TNFSF4	H M	H M	H M	
Pax5		H		
PD-1	H	H M	H M	H
PD-L2	H M	H M	H M	
PDGF		H		
PDGF-A	H M	H M	H M	
PDGF-AB		H	H	
PDGF-C	H	H	H	
PDGF-D	H	H	H	
PDGF R α	H M	H M	H M	H

PDGF R α Continued

Product: Human PDGF R α Polyclonal
Catalog # AF-307-NA

Reference(s):

Faraone, D. *et al.* (2006) Heterodimerization of FGF-receptor 1 and PDGF-receptor- α : a novel mechanism underlying the inhibitory effect of PDGF-BB on FGF-2 in human cells. *Blood* **107**:1896.

Sample(s) Tested: porcine aortic endothelial cells

Product: Mouse PDGF R α Polyclonal
Catalog # AF1062

Reference(s):

Tejada, M.L. *et al.* (2006) Tumor-driven paracrine platelet-derived growth factor receptor α signaling is a key determinant of stromal cell recruitment in a model of human lung carcinoma. *Clin. Cancer Res.* **12**:2676.

Sample(s) Tested: human tumor tissue from mice

Application: Immunoprecipitation

Product: Human PDGF R α Polyclonal
Catalog # AF-307-NA

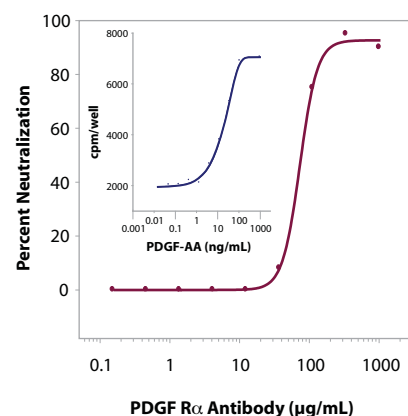
Reference(s):

Faraone, D. *et al.* (2006) Heterodimerization of FGF-receptor 1 and PDGF-receptor- α : a novel mechanism underlying the inhibitory effect of PDGF-BB on FGF-2 in human cells. *Blood* **107**:1896.

Sample(s) Tested: porcine aortic endothelial cells

Application: Neutralization

Product: Mouse PDGF R α Polyclonal
Catalog # AF1062



Neutralization of Endogenous Human PDGF R α

Activity. Recombinant human PDGF-AA (Catalog # 221-AA) stimulates human WS1 fibroblast proliferation (inset). The effect is neutralized by goat anti-mouse PDGF R α polyclonal antibody (Catalog # AF1062) in a dose-dependent manner (red). Cell proliferation was measured by ^3H -thymidine incorporation.

Product: Human PDGF R α Monoclonal
Catalog # MAB322

Reference(s):

Faraone, D. *et al.* (2006) Heterodimerization of FGF-receptor 1 and PDGF-receptor- α : a novel mechanism underlying the inhibitory effect of PDGF-BB on FGF-2 in human cells. *Blood* **107**:1896.

Sample(s) Tested: human umbilical vein endothelial cells

Application: Western Blot

Product: Human PDGF R α Monoclonal
Catalog # MAB322

Reference(s):

Bosse, Y. *et al.* (2006) Fibroblast growth factor 2 and transforming growth factor β 1 synergism in human bronchial smooth muscle cell proliferation. *Am. J. Respir. Cell Mol. Biol.* **34**:746.

Sample(s) Tested: human bronchial smooth muscle cells

PDGF R β

Application: ELISA Development

Product: Mouse PDGF R β Polyclonal
Catalog # AF1042

Reference(s):

Borkham-Kamphorst, E. *et al.* (2004) Dominant-negative soluble PDGF- β receptor inhibits hepatic stellate cell activation and attenuates liver fibrosis. *Lab. Invest.* **84**:766.

Sample(s) Tested: rat serum

Application: Flow Cytometry

Product: Human PDGF R β Monoclonal
Catalog # MAB1263

Reference(s):

Nagineji, C.N. *et al.* (2005) Expression of PDGF and their receptors in human retinal pigment epithelial cells and fibroblasts: regulation by TGF- β . *J. Cell. Physiol.* **203**:35.

Sample(s) Tested: human choroidal fibroblast cells

Application: Immunohistochemistry

Product: Human PDGF R β Monoclonal
Catalog # MAB1263

Reference(s):

Kubler, H.R. *et al.* (2005) *In vitro* cytotoxic effects of imatinib in combination with anticancer drugs in human prostate cancer cell lines. *Prostate* **63**:385.

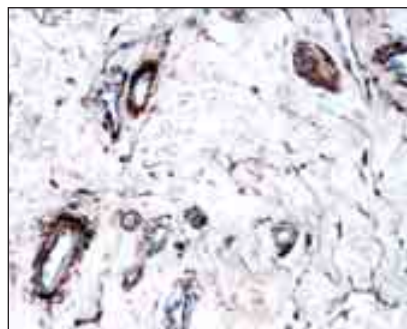
Sample(s) Tested: human umbilical vein endothelial cells and PC-3, LNCaP and DU 145 prostate cancer cell lines

Product: Human PDGF R β Polyclonal
Catalog # AF385

Reference(s):

Kalaaji, M. *et al.* (2006) Nephritogenic lupus antibodies recognize glomerular basement membrane-associated chromatin fragments released from apoptotic intraglomerular cells. *Am. J. Pathol.* **168**:1779.

Sample(s) Tested: mouse kidney



PDGF R β in Human Breast Cancer. PDGF R β was detected in paraffin-embedded human breast cancer tissue sections using anti-human PDGF R β polyclonal antibody (Catalog # AF385). Tissue was stained using the anti-goat HRP-DAB Cell and Tissue Staining Kit (Catalog # CTS008; brown) and counterstained with hematoxylin (blue).

Product: Mouse PDGF R β Polyclonal
Catalog # AF1042

Reference(s):

Tejada, M.L. *et al.* (2006) Tumor-driven paracrine platelet-derived growth factor receptor α signaling is a key determinant of stromal cell recruitment in a model of human lung carcinoma. *Clin. Cancer Res.* **12**:2676.

Sample(s) Tested: human tumor tissue from mice

Application: Immunoprecipitation

Product: Human PDGF R β Polyclonal
Catalog # AF385

Reference(s):

Foehr, E.D. *et al.* (2001) The role of tyrosine residues in fibroblast growth factor receptor 1 signaling in PC12 cells. Systematic site-directed mutagenesis in the endodomain. *J. Biol. Chem.* **276**:37529.

Sample(s) Tested: rat PC12 dopaminergic cell line expressing human PDGF R β

Product: Mouse PDGF R β Polyclonal
Catalog # AF1042

Reference(s):

Garton, A.J. *et al.* (2006) OSI-930: a novel selective inhibitor of Kit and kinase insert domain receptor tyrosine kinases with antitumor activity in mouse xenograft models. *Cancer Res.* **66**:1015.

Sample(s) Tested: human umbilical vein endothelial cells, HMC-1 mast cell leukemia, WBA small-cell lung carcinoma, BxPc3-A1 pancreatic carcinoma cell lines

Application: Neutralization

Product: Human PDGF R β Polyclonal
Catalog # AF385

Reference(s):

Faraone, D. *et al.* (2006) Heterodimerization of FGF-receptor 1 and PDGF-receptor- α : a novel mechanism underlying the inhibitory effect of PDGF-BB on FGF-2 in human cells. *Blood* **107**:1896.

Sample(s) Tested: human umbilical vein endothelial cells

Application: Western Blot

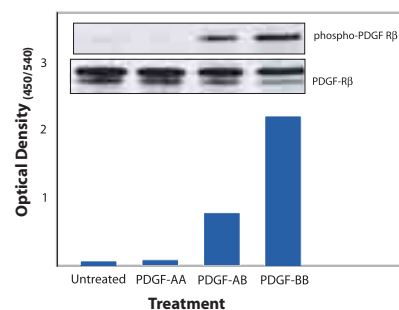
Product: Human PDGF R β Polyclonal
Catalog # AF385

Reference(s):

Nili, N. *et al.* (2003) Decorin inhibition of PDGF-stimulated vascular smooth muscle cell function: potential mechanism for inhibition of intimal hyperplasia after balloon angioplasty. *Am. J. Pathol.* **163**:869.

Sample(s) Tested: rabbit aortic smooth muscle cells

Product: Human PDGF R β Biotin Polyclonal
Catalog # BAF385



Ligand-induced PDGF R β Phosphorylation in Human Fibroblasts. Immortalized human fibroblasts were treated with recombinant PDGF-AA (Catalog # 221-AA), PDGF-AB (Catalog # 222-AB) or PDGF-BB (Catalog # 220-BB). Lysates generated from treated and untreated cells were assessed by immunoprecipitation (IP) /Western blot (inset). IPs were performed using anti-PDGF R α monoclonal antibody (Catalog # MAB1263) and anti-mouse IgG agarose. Western blots were incubated with biotinylated mouse anti-phosphotyrosine monoclonal antibody (Catalog # BAM1676) to detect phospho-PDGF R α . Bands were visualized with Streptavidin-HRP (Catalog # DY998) followed by chemiluminescent detection. Blots were stripped and total PDGF R α was detected using biotinylated goat anti-human PDGF R α polyclonal antibody (Catalog # BAF385). The results are consistent with those obtained by Phospho-PDGF R β DuoSet IC ELISA (Catalog # DYC1767) from the same lysates (histogram).

Molecule	Monoclonal Antibodies	Polyclonal Antibodies	Biotinylated Antibodies	Fluorochrome-labeled Antibodies
PDGF R β	H M	H M	H M	H
PILR- β		M		
PIR-B	M	M		
Plexin A1	M			
Plexin B1		H		
Plexin C1		H		
Profilin-like Protein		Tg		
PSGL-1	H			
Rae-1	M			M
Rae-1 ϵ	M			
Rae-1 γ		M		
RANK	H M	H M	H M	
S100A8		M	M	
S100A9	M	M		
L-Selectin	H M R	H M R	H M R	H M
P-Selectin	H M	H M	H M	H
Semaphorin 3A	H	H		
Semaphorin 3C	M	M	M	
Semaphorin 6A	H M	H M	H M	
Semaphorin 7A	H M	H M	H M	
Siglec-2/CD22	M	M		H
Siglec-3/CD33	H	M	M	H
Siglec-5	H	H	H	
Siglec-6		H		
Siglec-7	H	H	H	
Siglec-9	H	H	H	H
Siglec-10	H	H	H	
Siglec-11		H	H	
Siglec-F	M	M	M	
SIGNR1/CD209	M	M	M	
SIGNR4	M	M	M	
SIRP β 1	H	H	H	
SLAM/CD150	H			
SR-AI/MSR	H M	H M	H M	
SREC-I/SR-F1		H	H	
SREC-II		H	H	
Stabilin-1		H	H	
Stabilin-2		H	H	
STAT1		H M	H	
STAT2		H M	H	
STAT3	H	H M R		
STAT4		H M	H M	
STAT5a	H M	H M		
STAT5a/b		H M		
STAT5b	H	H M		

PSGL-1

Application: Flow Cytometry

Product: Human PSGL-1 Monoclonal
Catalog # MAB996

Reference(s):

Sheikh, S. *et al.* (2004) Immobilization of rolling NK cells on platelet-borne P-selectin under flow by proinflammatory stimuli, interleukin-12, and leukotriene B₄. *J. Leukoc. Biol.* **76**:603.

Sample(s) Tested: human platelets and natural killer cells

Rae-1

Application: Flow Cytometry

Product: Mouse Rae-1 Monoclonal
Catalog # MAB17581

Reference(s):

Dasgupta, S. *et al.* (2005) Inhibition of NK cell activity through TGF- β 1 by down-regulation of NKG2D in a murine model of head and neck cancer. *J. Immunol.* **175**:5541.

Sample(s) Tested: mouse natural killer cells

Product: Mouse Rae-1 Monoclonal
Catalog # MAB17582

Reference(s):

Hamerman, J.A. *et al.* (2004) Cutting edge: Toll-like receptor signaling in macrophages induces ligands for the NKG2D receptor. *J. Immunol.* **172**:2001.

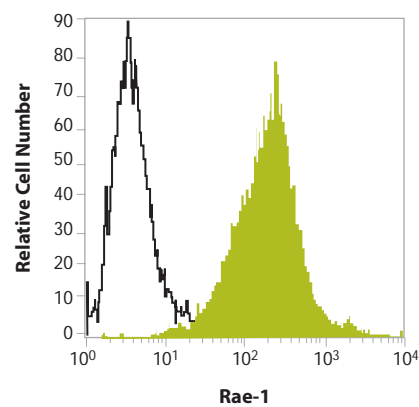
Sample(s) Tested: human macrophages

Product: Mouse Rae-1 PE Monoclonal
Catalog # FAB17582P

Reference(s):

Ogasawara, K. *et al.* (2004) NKG2D blockade prevents autoimmune diabetes in NOD mice. *Immunity* **20**:757.

Sample(s) Tested: mouse T cells



Detection of Rae-1 by Flow Cytometry. Mouse macrophage RAW 264.7 cells were stained using PE-conjugated rat anti-mouse Rae-1 monoclonal antibody (Catalog # FAB17582P; filled histogram) or isotype control (Catalog # IC006P; open histogram).

L-Selectin

Application: Western Blot

Product: Human L-Selectin/CD62L
Polyclonal
Catalog # AF728

Reference(s):

Mowery, P. *et al.* (2004) Synthetic glycoprotein mimics inhibit L-selectin-mediated rolling and promote L-selectin shedding. *Chem. Biol.* **11**:725.

Sample(s) Tested: human Jurkat leukemic T cell line

Siglec-7

Application: Flow Cytometry

Product: Human Siglec-7 Monoclonal
Catalog # MAB1138

Reference(s):

Zola, H. *et al.* (2007) CD molecules 2006--human cell differentiation molecules. *J. Immunol. Methods* **319**:1.

Sample(s) Tested: human leukocytes

STAT1

Application: Immunoprecipitation

Product: Human/Mouse STAT1 (p91)
Polyclonal
Catalog # PAF-ST1

Reference(s):

Subramaniam, P.S. & H.M. Johnson. (2002) Lipid microdomains are required sites for the selective endocytosis and nuclear translocation of IFN- γ , its receptor chain IFN- γ receptor-1, and the phosphorylation and nuclear translocation of STAT1 α . *J. Immunol.* **169**:1959.

Sample(s) Tested: human WISH amniotic cell line

STAT4

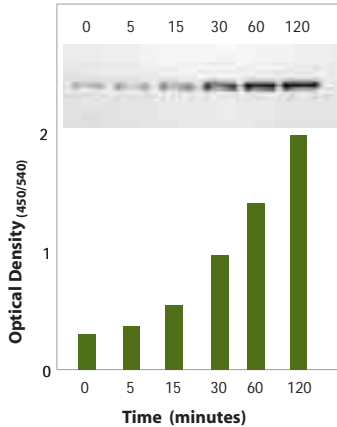
Application: Western Blot

Product: Human/Mouse STAT4 Polyclonal
Catalog # PAF-ST4

Reference(s):

Metcalfe, S.M. *et al.* (2005) Leukemia inhibitory factor is linked to regulatory transplantation tolerance. *Transplantation* **79**:726.

Sample(s) Tested: mouse splenocytes



STAT4 in IL-12-treated NK92 Cells. Human NK lymphoma NK92 cells were treated with IL-12 for the indicated times. Nuclear extracts were assessed by Western blot using goat anti-human/mouse STAT4 polyclonal antibody (Catalog # PAF-ST4). The results correlate well with those obtained with the Human Active STAT4 DuoSet IC assay (Catalog # DYC1574; histogram).

STAT5a

Application: Immunohistochemistry

Product: Human/Mouse STAT5a Monoclonal
Catalog # MAB2174

Reference(s):

Kawashima, T. *et al.* (2006) Rac1 and a GTPase-activating protein, MgcRacGAP, are required for nuclear translocation of STAT transcription factors. *J. Cell Biol.* **175**:937.

Sample(s) Tested: human HeLa cervical adenocarcinoma cell line

Application: Immunoprecipitation

Products: Human/Mouse STAT5a Polyclonal
Catalog # PA-ST5A

Reference(s):

Zhu, J. *et al.* (2003) Stat5 activation plays a critical role in Th2 differentiation. *Immunity* **19**:739.

Sample(s) Tested: mouse chromatin from Th1 cells

Application: Western Blot

Product: Human/Mouse STAT5a Monoclonal
Catalog # MAB2174

Reference(s):

Kawashima, T. *et al.* (2006) Rac1 and a GTPase-activating protein, MgcRacGAP, are required for nuclear translocation of STAT transcription factors. *J. Cell Biol.* **175**:937.

Sample(s) Tested: mouse BaF3 pro B cell line

Product: Human/Mouse STAT5a Polyclonal
Catalog # PA-ST5A

Reference(s):

Bovolenta, C. *et al.* (2002) Retroviral interference on STAT activation in individuals coinfecting with human T cell leukemia virus type 2 and HIV-1. *J. Immunol.* **169**:4443.

Sample(s) Tested: human T cells

STAT5a/b

Application: Western Blot

Product: Human/Mouse STAT5a/b Polyclonal
Catalog # AF2168

Reference(s):

Zhu, J. *et al.* (2002) Growth factor independent-1 induced by IL-4 regulates Th2 cell proliferation. *Immunity* **16**:733.

Sample(s) Tested: mouse T cells

STAT5b

Application: Immunohistochemistry

Product: Human/Mouse STAT5b Polyclonal
Catalog # AF1584

Reference(s):

Kawashima, T. *et al.* (2006) Rac1 and a GTPase-activating protein, MgcRacGAP, are required for nuclear translocation of STAT transcription factors. *J. Cell Biol.* **175**:937.

Sample(s) Tested: human HeLa cervical adenocarcinoma cell line

Application: Immunoprecipitation

Product: Human/Mouse STAT5b Polyclonal
Catalog # AF1584

Reference(s):

Mazzoni, A. *et al.* (2002) Myeloid suppressor lines inhibit T cell responses by an NO-dependent mechanism.

J. Immunol. **168**:689.

Sample(s) Tested: mouse lymphocytes

Product: Human/Mouse STAT5b Polyclonal
Catalog # PA-ST5B

Reference(s):

Diveu, C. *et al.* (2004) Predominant expression of the long isoform of GP130-like (GPL) receptor is required for interleukin-31 signaling. *Eur. Cytokine Netw.* **15**:291.

Sample(s) Tested: mouse BaF3 pro B cell line transfected with human OSMR or gp130

STAT6

Application: Immunoprecipitation

Product: Human/Mouse STAT6 Polyclonal
Catalog # PA-ST6

Reference(s):

Hasegawa, A. *et al.* (2006) Impaired GATA3-dependent chromatin remodeling and Th2 cell differentiation leading to attenuated allergic airway inflammation in aging mice.

J. Immunol. **176**:2546.

Sample(s) Tested: mouse T cells

Molecule	Monoclonal Antibodies	Polyclonal Antibodies	Biotinylated Antibodies	Fluorochrome-labeled Antibodies
STAT6	H M	H M R		
TCCR/WSX-1	M	H M	H M	
TER-119	M		M	M
TGF-β		Ms		
TGF-β RI/ALK-5	H M	H M	M	
TGF-β RII	H M	H M	H M	H M
TGF-β RIIB		H		
TGF-β RIII	H	H	H	
Thymus Chemokine-1	M R	M R	M R	
TIM-1/KIM-1/HAVCR	H M	H M R	H M	
TIM-2	M	M	M	
TIM-3	H M	H M	H M	H M
TIM-4		H M	H	
TLR1	M	H M	H M	H
TLR2	M	H M	H M	M
TLR3	M	H M	H	H
TLR4	H M	H	H	H M
TLR6		M	M	
TLR9	H			
TNF-α/TNFSF1A	H M R Ca CR P Pr	H M R B Ca CR P Pr	H M	
TNF-β/TNFSF1B	H M	H M	H M	H
TNF RI/TNFRSF1A	H M	H	H M	H
TNF RII/TNFRSF1B	H M	H	H M	H
TRAIL R1/TNFRSF10A	H	H	H	H
TRAIL R2/TNFRSF10B	M	H M	H M	H
TRAIL R3/TNFRSF10C	H	H	H	H
TRAIL R4/TNFRSF10D	H	H	H	H
TRANCE/RANK L/TNFSF11	H M	H M	H M	
TREM-1	H M	H M	H M	H M
TREM-2	H M	H M	H M	
TREM-3	M	M	M	
TREML1/TLT-1	H M	H M	H M	
TREML2		H		
Tryptase β-1/MCPT-7	M	M	M	
Tryptase β-2/TPSB2	H			
TSLP	H M	H M	H M	
TSLP R	H M	H M	H	
ULBP-1	H	H	H	
ULBP-2	H	H	H	H
ULBP-3	H	H	H	
Vanilloid R-like 3		H		
Vanilloid R1		R		
Vav-1		H		
XCL1/Lymphotactin	H M	H M	H M	

Key: H Human M Mouse R Rat B Bovine Ca Canine Ch Chicken CR Cotton Rat E Equine F Feline P Porcine Pr Primate Rb Rabbit Tg *T. gondii* V Viral

Please visit www.RnDSystems.com and click on Immunology under the Browse by research topic menu for a complete listing of Immunology-related products.

STAT6 Continued

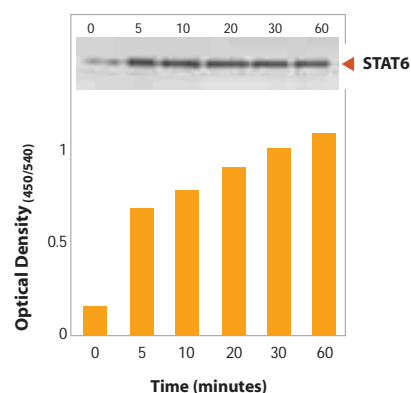
Application: Western Blot

Product: Human/Mouse STAT6 Polyclonal Catalog # PA-STAT6

Reference(s):

Fujimoto, M. *et al.* (2002) A regulatory role for suppressor of cytokine signaling-1 in T(h) polarization *in vivo*. *Int. Immunol.* **14**:1343.

Sample(s) Tested: mouse thymocytes



STAT6 in Mouse Da3 Cells. Mouse myeloid Da3 cells were treated with IL-4 for the indicated times. Nuclear extracts were assessed by Western blot (inset) using rat anti-mouse STAT6 monoclonal antibody (Catalog # MAB2169). The results correlate well with those obtained from the same nuclear extracts analyzed using the mouse Active STAT6 DuoSet IC ELISA (Catalog # DYC2169).

TGF-β

Application: Electron Microscopy

Product: TGF-β Pan Specific Polyclonal Catalog # AB-100-NA

Reference(s):

Waghbi, M.C. *et al.* (2005) Uptake of host cell transforming growth factor-β by *Trypanosoma cruzi* amastigotes in cardiomyocytes: potential role in parasite cycle completion. *Am. J. Pathol.* **167**:993.

Sample(s) Tested: mouse cardiomyocytes

Application: *In Vivo*

Product: TGF-β Pan Specific Polyclonal Catalog # AB-100-NA

Reference(s):

Matsumura, S. *et al.* (2007) Increase in transforming growth factor-β in the brain during infection is related to fever, not depression of spontaneous motor activity. *Neuroscience* **144**:1133.

Sample(s) Tested: rat

Application: Neutralization

Product: TGF- β Pan Specific Polyclonal
Catalog # AB-100-NA

Reference(s):

Zheng, S.G. *et al.* (2004) Natural and induced CD4⁺CD25⁺ cells educate CD4⁺CD25⁻ cells to develop suppressive activity: the role of IL-2, TGF- β , and IL-10. *J. Immunol.* **172**:5213.

Sample(s) Tested: human T cells

TGF- β RII

Application: Flow Cytometry

Product: Mouse TGF- β RII Biotin Polyclonal
Catalog # BAF532

Reference(s):

Marie, J.C. *et al.* (2006) Cellular mechanisms of fatal early-onset autoimmunity in mice with the T cell-specific targeting of transforming growth factor- β receptor. *Immunity* **25**:441.

Sample(s) Tested: mouse T cells

TIM-1/KIM-1/HAVCR

Application: Neutralization

Product: Mouse TIM-1/KIM-1/HAVCR
Monoclonal
Catalog # MAB1817

Reference(s):

Encinas, J.A. *et al.* (2005) Anti-T-cell Ig and mucin domain-containing protein 1 antibody decreases TH2 airway inflammation in a mouse model of asthma. *J. Allergy Clin. Immunol.* **116**:1343.

Sample(s) Tested: mouse lung

TNF RI/TNFRSF1A

Application: Flow Cytometry

Product: Human TNF RI/TNFRSF1A
Fluorescein Monoclonal
Catalog # FAB225F

Reference(s):

Islam, A. *et al.* (2006) Extracellular TNFR1 release requires the calcium-dependent formation of a nucleobindin 2-ARTS-1 complex. *J. Biol. Chem.* **281**:6860.

Sample(s) Tested: human umbilical vein endothelial cells

Product: Human TNF RI/TNFRSF1A
Monoclonal
Catalog # MAB625

Reference(s):

Hawari, F.I. *et al.* (2004) Release of full-length 55-kDa TNF receptor 1 in exosome-like vesicles: a mechanism for generation of soluble cytokine receptors. *Proc. Natl. Acad. Sci. U.S.A.* **101**:1297.

Sample(s) Tested: human umbilical vein endothelial cells

Application: Multiplex Development

Product: Human TNF RI/TNFRSF1A
Biotin Polyclonal
Catalog # BAF225

Reference(s):

Copeland, S. *et al.* (2004) Direct comparison of traditional ELISAs and membrane protein arrays for detection and quantification of human cytokines. *J. Immunol. Methods* **284**:99.

Sample(s) Tested: human whole blood

TRAIL R2/TNFRSF10B

Application: Immunohistochemistry

Product: Human/Mouse TRAIL R2/TNFRSF10B
Polyclonal
Catalog # AF837

Reference(s):

Bretz, J.D. *et al.* (2002) Inflammatory cytokine regulation of TRAIL-mediated apoptosis in thyroid epithelial cells. *Cell Death Differ.* **9**:274.

Sample(s) Tested: human thyroid

Application: Neutralization

Product: Mouse TRAIL R2/TNFRSF10B
Polyclonal
Catalog # AF721

Reference(s):

Bharhani, M.S. *et al.* (2005) Reovirus serotype 1/strain Lang-stimulated activation of antigen-specific T lymphocytes in Peyer's patches and distal gut-mucosal sites: activation status and cytotoxic mechanisms. *J. Immunol.* **174**:3580.

Sample(s) Tested: human CTL effector cells

TRAIL R3/TNFRSF10C

Application: Flow Cytometry

Product: Human TRAIL R3/TNFRSF10C
Polyclonal
Catalog # AF630

Reference(s):

Bretz, J.D. *et al.* (2002) Inflammatory cytokine regulation of TRAIL-mediated apoptosis in thyroid epithelial cells. *Cell Death Differ.* **9**:274.

Sample(s) Tested: human thyroid epithelial cells

TRANCE/RANK Ligand/ TNFSF11

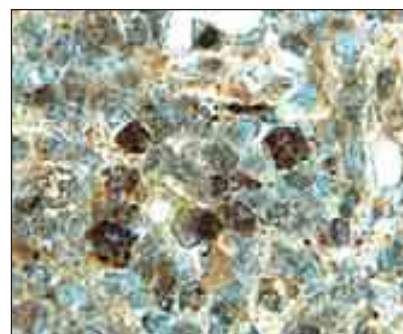
Application: Immunohistochemistry

Product: Human TRANCE/RANK L/TNFSF11
Monoclonal
Catalog # MAB626

Reference(s):

Lisignoli, G. *et al.* (2007) CCL20 chemokine induces both osteoblast proliferation and osteoclast differentiation: Increased levels of CCL20 are expressed in subchondral bone tissue of rheumatoid arthritis patients. *J. Cell. Physiol.* **210**:798.

Sample(s) Tested: human subchondral bone

**TRANCE/RANK Ligand in Human Lymph Node.**

TRANCE/RANK Ligand was detected in paraffin-embedded human lymph node sections using anti-human TRANCE monoclonal antibody (Catalog # MAB626). Tissue was stained using the anti-mouse HRP-DAB Cell and Tissue Staining Kit (Catalog # CTS002; brown) and counterstained with hematoxylin (blue).

Product: Mouse TRANCE/RANKL/TNFSF11
Biotin
Catalog # BAF462

Reference(s):

Kim, M.Y. *et al.* (2005) OX40 signals during priming on dendritic cells inhibit CD4 T cell proliferation: IL-4 switches off OX40 signals enabling rapid proliferation of Th2 effectors. *J. Immunol.* **174**:1433.

Sample(s) Tested: mouse splenocytes

Application: Western Blot

Product: Human TRANCE/RANK L/TNFSF11
Monoclonal
Catalog # MAB626

Reference(s):

Kanamaru, F. *et al.* (2004) Expression of membrane-bound and soluble receptor activator of NF-kappaB ligand (RANKL) in human T cells. *Immunol. Lett.* **94**:239.

Sample(s) Tested: mouse NIH3T3 fibroblast cell line transfected with human TRANCE

TREM-1

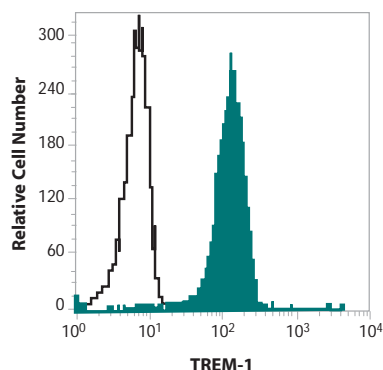
Application: Flow Cytometry

Product: Human TREM-1 Biotin Polyclonal
Catalog # BAF1278

Reference(s):

Mohamadzadeh, M. *et al.* (2006) Activation of triggering receptor expressed on myeloid cells-1 on human neutrophils by marburg and ebola viruses. *J. Virol.* **80**:7235.

Sample(s) Tested: human neutrophils



Detection of TREM-1 by Flow Cytometry. Human peripheral blood neutrophils were stained using PE-conjugated mouse anti-human TREM-1 monoclonal antibody (Catalog # FAB1278P; filled histogram). Staining with PE-conjugated isotype control (Catalog # IC002P; open histogram) highlights the specificity of the TREM-1 antibody.

Application: Immunohistochemistry

Product: Human TREM-1 PE Monoclonal
Catalog # FAB1278P

Reference(s):

Fortin, C.F. *et al.* (2007) Effects of TREM-1 activation in human neutrophils: activation of signaling pathways, recruitment into lipid rafts and association with TLR4. *Int. Immunol.* **19**:41.

Sample(s) Tested: human peripheral blood mononuclear cells

Application: Western Blot

Product: Mouse TREM-1 Monoclonal
Catalog # MAB1187

Reference(s):

Murakami, Y. *et al.* (2007) Lipopolysaccharide-induced up-regulation of triggering receptor expressed on myeloid cells-1 expression on macrophages is regulated by endogenous prostaglandin E2. *J. Immunol.* **178**:1144.

Sample(s) Tested: human resident peritoneal macrophages

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Main Product Search

Product Search Results Filter
Even the most general product searches can be filtered using drop down boxes to quickly locate your antibody and application of interest.

Search Results
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Antibody Application Key
Click the link to see the Key for application abbreviations

Molecule	Species	Description	Application (Key)	Host/Type	Cat. # Datasheet	Size	P
CCL5/RANTES	Human	Human CCL5/RANTES Mab (Clone 16411)	B/N, WB	Mouse IgG1	MAB2781	500 µg	\$

Primary Application	Application Key
AP	Affinity Purification
B/N	Blocking Neutralization
CD	Cell Depletion
Dot	Dot Blots
ELISA (Cap)	ELISA Capture
ELISA (Det)	ELISA Detection
ELISA (Comp)	ELISA Competitive
FC	Flow Cytometry
FA	Functional Assay
Gel	Gel Shift
EMSA	Electrophoretic Mobility Shift Assay
IP	Immunoprecipitation
WB	Western Blot

Applications in Bold and Normal Font Style
While most antibody applications are shown in bold type, some for monoclonal antibodies appear in normal font style. Normal font indicates that the antibody has been validated by R&D Systems for an application, but that a different clone with the application shown in bold may be superior for that specific application.

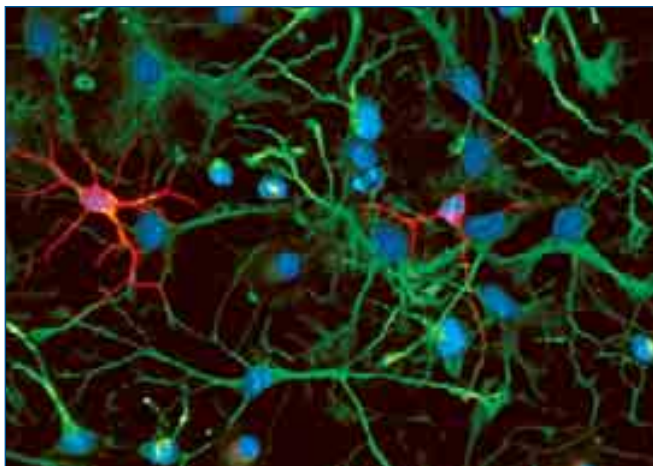
Secondary Reagents

NorthernLights™

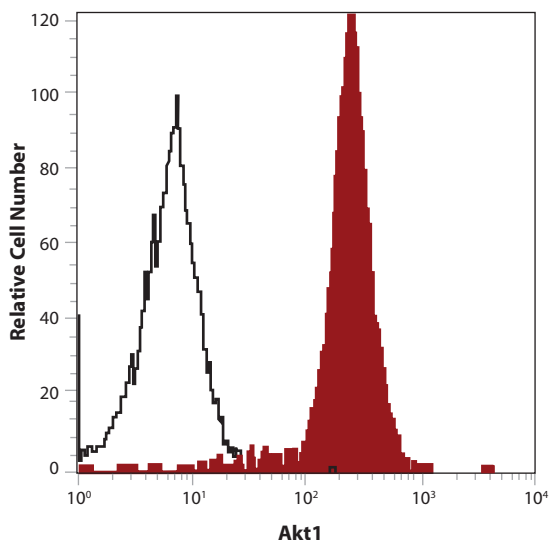
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Neural progenitors were labeled with anti-rat Nestin polyclonal antibody (Catalog # AF2736) and stained with donkey anti-goat NorthernLights-493 secondary antibody (Catalog # NL003; green). Differentiated neurons were labeled with neuron-specific mouse anti-β-III tubulin monoclonal antibody (TuJ1; Catalog # MAB1195) and stained using donkey anti-mouse NorthernLights-557 secondary antibody (Catalog # NL007; red). Nuclei were stained with DAPI (blue).



Jurkat T cells were fixed, permeabilized, and incubated with anti-human Akt1 monoclonal antibody (Catalog # MAB17751). Cells were then stained with anti-mouse IgG NorthernLights-637 (Catalog # NL008; rust histogram). Control staining was done by incubating cells in IgG1 isotype control monoclonal antibody (Catalog # MAB002), followed by the staining with NorthernLights-637 (open histogram).

NorthernLights Antibody/Label	Catalog #	Abs/Em Maxima	Laser (Ex)	Comparable Fluorochromes
NorthernLights-493 anti-Rabbit IgG anti-Mouse IgG anti-Goat IgG anti-Sheep IgG Streptavidin	NL006 NL009 NL003 NL012 NL997	493/514	Argon (488)	FITC (492/520) Cy ² (489/506) Alexa Fluor® 488 (494/519)
NorthernLights-557 anti-Rabbit IgG anti-Mouse IgG anti-Goat IgG anti-Sheep IgG Streptavidin	NL004 NL007 NL001 NL010 NL999	557/575	Krypton (568) HeNe (543)	Phycoerythrin (565/575) Rhodamine Red X (570/590) Cy ³ (548/562)
NorthernLights-637 anti-Rabbit IgG anti-Mouse IgG anti-Goat IgG anti-Sheep IgG Streptavidin	NL005 NL008 NL002 NL011 NL998	637/658	HeNe (633)	Allophycocyanin (645/660) Alexa Fluor® 647 (650/668) Cy ⁵ (650/670)

Additional Secondary Antibodies & Kits

Additional Secondary Antibodies		
ANTIBODY	LABEL	HOST
anti-Chicken IgY	Btn	Goat
anti-Goat IgG	U, Btn, HRP, APC, CFS, PE	Donkey
anti-Goat IgG	Btn, HRP	Rabbit
anti-Goat IgG	U, Btn, HRP	Chicken
anti-Goat IgG	PE	Porcine
anti-Hamster IgG	U, Btn	Mouse
anti-Human IgG	U	Goat
anti-Mouse IgG	U, Btn, HRP, FITC, APC, PE	Goat
anti-Mouse IgG	U, Btn, HRP	Donkey
anti-Rabbit IgG	U, Btn, HRP, APC, CFS, PE	Goat
anti-Rabbit IgG	U	Donkey
anti-Rat IgG	U, Btn, APC, FITC, PE	Goat
anti-Sheep IgG	U, Btn, HRP	Donkey
U Unlabeled APC Allophycocyanin	Btn Biotin CFS or FITC Fluorescein	HRP Horseradish Peroxidase PE Phycoerythrin

Cell and Tissue Staining Kits		
SPECIES	LABEL	COMPONENTS
Anti-goat Anti-mouse Anti-rabbit Anti-rat	HRP-DAB System	Secondary Biotinylated Antibody, Streptavidin-HRP Conjugate, DAB Chromogen, DAB Chromogen Buffer, Blocking Reagents
Anti-goat Anti-mouse Anti-rabbit Anti-rat	HRP-AEC System	Secondary Biotinylated Antibody, Streptavidin-HRP Conjugate, AEC Chromogen, AEC Chromogen Buffer, Blocking Reagents

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? What is the difference between AB##, AF##, BAF##, MAB## and other catalog prefixes for antibodies?

AB designated antibodies are protein G-purified fractions of polyclonal antibody: they contain the total IgG fraction and may include IgG not specific for the antigen. AF designated antibodies are affinity-chromatography purified against the antigen: AF antibodies contain only IgG specific to epitopes on the antigen. Antibodies that have the designation MAB are monoclonal antibodies. BAF and BAM prefixes designate biotinylated versions of the AF and MAB antibodies, respectively. FAB and IC prefixes indicate fluorochrome-labeled antibodies that are validated for flow cytometry. In particular, IC designates an intracellular flow cytometry application.

? What is the molecular weight of IgG?

An IgG protein comprises two heavy chains that are approximately 50 kDa each and two light chains that are approximately 25 kDa each for a total molecular weight of approximately 150 kDa.

? What epitope does the antibody recognize?

While we do not epitope map our antibodies, the immunogen used for antibody generation is listed on the technical data sheet. In most cases we use a mature, biologically active protein instead of a peptide to generate highly specific antibodies. This type of immunogen makes epitope mapping difficult.

? Why should I reconstitute the antibody in PBS when the data sheet states that it is lyophilized from a PBS solution?

Our antibody production lots are usually highly concentrated and therefore lyophilized from a very small volume of PBS. This additional salt is usually insignificant when diluted to a working concentration in most applications. If the salt concentration is a concern, please contact Technical Service to acquire more information for your particular lot of antibody.

? If an antibody is tested in immunocytochemistry (ICC) can it be used in immunohistochemistry (IHC) and vice versa?

R&D Systems will support any antibody that has been validated in-house for ICC or IHC (frozen or paraffin-embedded sections) regardless of which application is listed on the data sheet. Our technical specialists will work with any customer who encounters difficulties while using the validated antibody in ICC or IHC. Although we cannot guarantee that an antibody will work in all cells and/or tissues under all conditions, we can provide evidence that the antibodies do recognize the fixed antigen. In the event that the customer is unable to achieve successful staining, a product credit will be offered.

? How do I decide which antibody is best for my application?

Our website features an Antibody Application field that lists all the validated applications for each antibody offered at R&D Systems. Simply enter your analyte of interest in the search box and click *Go*. After these search results appear, activate the *Antibody Application* checkbox. You may then refine your search by defining the parameters in the section titled *Narrow results by*. If you see multiple antibodies that may work for your application, please access the technical data sheets by clicking on the catalog number link to determine which antibody is best suited for that application (see page 22). If you do not find an antibody for your application, please feel free to contact our Technical Service department. We have thousands of references citing the use of R&D Systems antibodies on file and will be happy to help determine if the application has been demonstrated in the literature.

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- Blocking/Neutralization
- Cell Selection
- Dot Blots
- ELISA Capture
- ELISA Detection
- ELISA (Competitive)
- Flow Cytometry
- Functional Assay
- Gel Shift
- Immunocytochemistry
- Immunohistochemistry
- Immunoprecipitation
- Western Blot

