

Neuroscience Current Issue

Alzheimer's & Dementia®
THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION

A novel sensitive assay for detection of a biomarker of pericyte injury in cerebrospinal fluid

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Introduction: Blood-brain barrier (BBB) breakdown and loss of brain capillary pericytes contributes to cognitive impairment. Pericytes express platelet-derived growth factor receptor- β (PDGFR β) that regulates brain angiogenesis and blood vessel stability. Elevated soluble PDGFR β (sPDGFR β) levels in cerebrospinal fluid (CSF) indicate pericyte injury and BBB breakdown, which is an early biomarker of human cognitive dysfunction.

Results: We developed standard operating procedures for a highly sensitive and reproducible sPDGFR β immunoassay with a dynamic range from 100 to 26,000 pg/mL, and confirmed elevated CSF sPDGFR β levels in individuals with cognitive dysfunction.

당신의 실험에 힘을 실어 드립니다.

Novus Biologicals의 Antibody는 선택할 수 있는 폭이 넓습니다.

Oncology	Immunology	Neuroscience	Cellular Response
<ul style="list-style-type: none"> Immunotherapy Tumor Microenvironment Angiogenesis Oncogenes & Tumor Suppressors Cancer Stem Cells 	<ul style="list-style-type: none"> Allergy & Autoimmune Diseases Hematopoietic Stem Cells Inflammation Virology, Bacteria & Parasites Toll-Like Receptors 	<ul style="list-style-type: none"> Neurodegeneration Sensory Systems Neural Stem Cells Development Cognition & Behavior Neurotransmission 	<ul style="list-style-type: none"> Hypoxia Autophagy Unfolded Protein Response Apoptosis Necroptosis

PDGF R beta Antibody (SY10~08)

- 다양한 Reactivity
- 많은 Application
- 넓은 확장성

Novus Antibody도 확인해보세요

Product Details

Summary

Reactivity	Hu, Mu, Rt Species Glossary
Applications	WB, IHC, IHC-P, IP
Clone	SY10-08
Clonality	Monoclonal
Host	Rabbit
Conjugate	Unconjugated
Concentration	1 mg/ml

Brain Shuttle Nephilysin reduces central Amyloid- β levels

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Reducing Amyloid β (A β) in the brain is of fundamental importance for advancing the therapeutics for Alzheimer's disease. The endogenous metallopeptidase nephilysin (NEP) has been identified as one of the key A β -degrading enzymes. Delivery of NEP to the brain by utilizing the Brain Shuttle (BS) transport system offers a promising approach for clearing central A β . We fused the extracellular catalytic domain of NEP to an active or inactive BS module. The two BS-NEP constructs were used to investigate the pharmacokinetic/pharmacodynamics relationships in the blood and the cerebrospinal fluid (CSF) in dose-response and multiple dosing. As previously shown, NEP was highly effective at degrading A β in blood but not in the CSF compartment after systemic administration. In contrast, the NEP with an active BS module led to a significant CSF exposure of BS-NEP, followed by substantial A β reduction in CSF and brain parenchyma. Our data show that a BS module against the transferrin receptor facilitates the transport of an A β degrading enzyme across the blood-brain barriers to efficiently reduce A β levels in both CSF and brain.

Recombinant Human Nephilysin (CHO-expressed) Protein, CF Summary

Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain
Endotoxin Level	<1.0 EU per 1 μ g of the protein by the LAL method.
Activity	Measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPPGFSAFK(Dnp)-OH (Catalog # ES005). The specific activity is >1,500 pmol/min/ μ g, as measured under the described conditions.
Source	Chinese Hamster Ovary cell line, CHO-derived human Nephilysin/CD10 protein Tyr52-Trp750 with an N-terminal 6-His tag
Accession #	P08473
N-terminal Sequence Analysis	His
Predicted Molecular Mass	81 kDa
SDS-PAGE	102 kDa, reducing conditions

R&D systems 만의 특별한 Protein Quality 당신의 실험에 놀라움을 선사합니다

믿을수 있는 QC

↓

성능이 보장된 Protein 제공



낮은 Variation

↓

모든 Lot 에서 동일한 결과 제공



높은 Activity

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시간의 절약 비용의 절감


