

NETO1 Antibody

Catalog # ASC11370

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q8TDF5
Other Accession	NP_694821 , 20452470
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	60191
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	NETO1 antibody can be used for detection of NETO1 by Western blot at 1 - 2 μ g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	81832
Other Names	Neuropilin and tolloid-like protein 1, Brain-specific transmembrane protein containing 2 CUB and 1 LDL-receptor class A domains protein 1, NETO1, BTCL1
Target/Specificity	NETO1; NETO1 antibody is predicted to not cross-react with other NETO protein family members.
Reconstitution & Storage	NETO1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	NETO1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NETO1
Synonyms	BTCL1
Function	Involved in the development and/or maintenance of neuronal circuitry. Accessory subunit of the neuronal N-methyl-D-aspartate receptor (NMDAR) critical for maintaining the abundance of GRIN2A- containing NMDARs in the postsynaptic density. Regulates long-term NMDA receptor-dependent synaptic plasticity and cognition, at least in the context of spatial learning and

memory (By similarity).

Cellular Location

[Isoform 2]: Cell membrane; Single-pass type I membrane protein. Postsynaptic density membrane. Note=Component of the postsynaptic density (PSD) of excitatory synapses. [Isoform 1]: Secreted.

Tissue Location

Isoform 1 and isoform 2 are retina-specific. Isoform 3 is found in retina as well as at lower levels in adult and fetal brain.

Background

NETO1 Antibody: Neuropilin and tolloid-like protein 1 (NETO1) is involved in the development and/or maintenance of neuronal circuitry. It is a type I transmembrane protein that is expressed in the brain and retina. NETO1 contains one LDL-receptor class A domain and two CUB domains and is either membrane-bound or secreted. It has three alternatively spliced isoforms, the first two of which are retina-specific and the third of which is found in both retina and brain tissue. Furthermore, as an accessory subunit of the neuronal N-methyl-D-aspartate receptor (NMDAR), it regulates long-term NMDA receptor-dependent synaptic plasticity and cognition, at least in the context of spatial learning and memory.

References

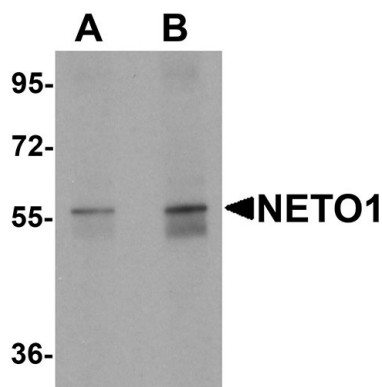
Michishita M, Ikeda T, Nakashiba T, et al. A novel gene, *Btcl1*, encoding CUB and LDLA domains is expressed in restricted areas of mouse brain. *Biochem. Biophys. Res. Commun.* 2003; 306:680-6.

St ¨hr H, Berger C, Fr ¨hlich S, et al. A novel gene encoding a putative transmembrane protein with two extracellular CUB domains and a low-density lipoprotein class A module: isolation of alternatively spliced isoforms in retina and brain. *Gene* 2002; 286:223-31

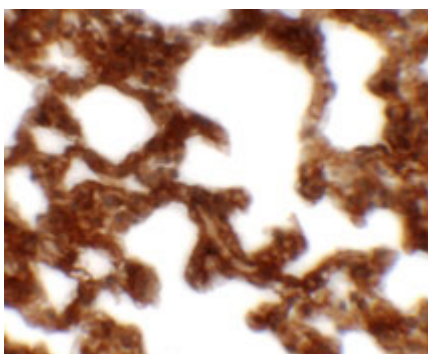
Straub C, Hunt DL, Yamasaki M, et al. Distinct functions of kainate receptors in the brain are determined by the auxiliary subunit *Neto1*. *Nat. Neurosci.* 2011; 14:866-73.

Ng D, Pitcher GM, Szilard RK, et al. *Neto1* is a novel CUB-domain NMDA receptor-interacting protein required for synaptic plasticity and learning. *PLoS Biol.* 2009; 7:e41

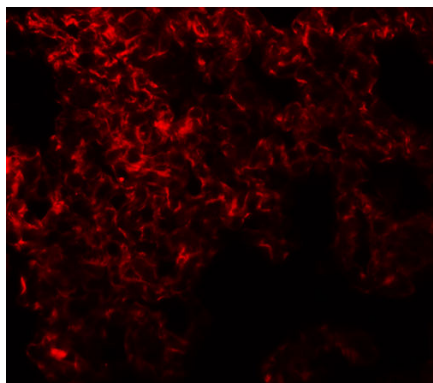
Images



Western blot analysis of NETO1 in human lung tissue lysate with NETO1 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of NETO1 in rat lung tissue with NETO1 antibody at 2.5 µg/mL.



Immunofluorescence of NETO1 in rat lung tissue with NETO1 antibody at 20 µg/mL.

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