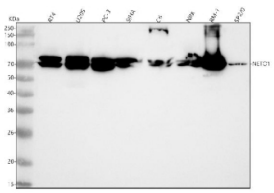
NETO1 Antibody / Neuropilin and tolloid-like protein 1 (FY12638)

Catalog No.	Formulation	Size
FY12638	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q8TDF5
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This NETO1 antibody is available for research use only.



Western blot analysis of NETO1 using anti-NETO1 antibody. Lane 1: human RT4 whole cell lysates, Lane 2: human U20S whole cell lysates, Lane 3: human PC-3 whole cell lysates, Lane 4: human SIHA whole cell lysates, Lane 5: rat C6 whole cell lysates, Lane 6: rat NRK whole cell lysates, Lane 7: mouse RM-1 whole cell lysates, Lane 8: mouse SP2/0 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NETO1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. Western blot probed with anti-NETO1 shows a doublet near ~70 kDa, higher than the predicted ~60 kDa, consistent with differentially N-glycosylated forms of the NETO1 protein.

Description

NETO1 antibody detects Neuropilin and tolloid-like protein 1, a neuronal transmembrane glycoprotein that modulates

ionotropic glutamate receptor function and synaptic plasticity. NETO1 acts as an auxiliary subunit of kainate-type glutamate receptors (KARs), regulating receptor trafficking, channel gating, and synaptic localization. The NETO1 antibody is widely used in neurobiology and synaptic physiology to study excitatory neurotransmission and learning mechanisms.

NETO1 is encoded by the NETO1 gene located on human chromosome 18q22.1. The protein is approximately 533 amino acids long and contains two extracellular CUB domains, a low-density lipoprotein receptor-like domain, a single transmembrane helix, and a short cytoplasmic tail. NETO1 is predominantly expressed in the hippocampus, cortex, and cerebellum, where it localizes to postsynaptic membranes and interacts with KAR subunits such as GluK2 and GluK5.

The NETO1 antibody detects a 63 kilodalton protein by western blot and shows punctate synaptic staining in neurons. NETO1 enhances the stability and functional diversity of KARs by modulating desensitization kinetics and surface expression. It contributes to long-term potentiation and synaptic scaling, processes underlying memory and learning. Mice lacking NETO1 display deficits in synaptic plasticity and spatial learning, confirming its critical role in excitatory neurotransmission.

Beyond the brain, NETO1 may participate in developmental signaling and axonal growth. Dysregulation or mutation of NETO1 has been associated with autism spectrum disorder, schizophrenia, and cognitive impairment. By shaping receptor signaling and synaptic strength, NETO1 maintains proper excitatory balance within neural circuits.

As a neuron-specific regulatory subunit of kainate receptors, NETO1 is a key molecule for studying excitatory synaptic physiology and plasticity. NSJ Bioreagents provides a validated NETO1 antibody optimized for its applications, supporting research into neurotransmission, synaptic regulation, and neurological disorders.

Application Notes

Optimal dilution of the NETO1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human NETO1 recombinant protein (Position: R5-R514) was used as the immunogen for the NETO1 antibody.

Storage

After reconstitution, the NETO1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.