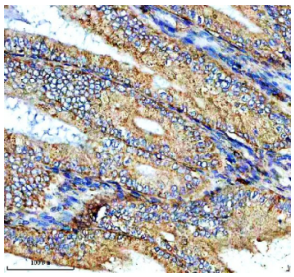
NTN4 Antibody / Netrin 4 (FY13278)

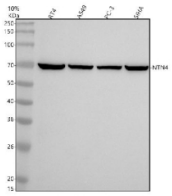
Catalog No.	Formulation	Size
FY13278	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

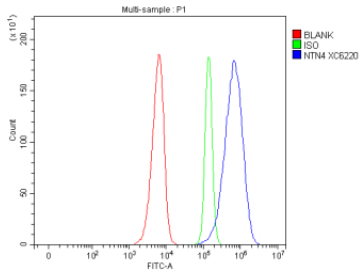
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9HB63
Applications	Western Blot: 0.25-0.5ug/ml Immunohistochemistry: 2-5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This NTN4 antibody is available for research use only.



Immunohistochemical staining of NTN4 using anti-NTN4 antibody. NTN4 was detected in a paraffin-embedded section of human endometrial cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-NTN4 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Western blot analysis of NTN4 using anti-NTN4 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human RT4 whole cell lysates, Lane 2: human whole cell lysates, Lane 3: human PC-3 whole cell lysates, Lane 4: human SIHA 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-NTN4 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 an ECL Plus Western Blotting Substrate. A specific band was detected for NTN4 at approximately 70 kDa. The expected molecular weight of NTN4 is ~70 kDa.



Flow Cytometry analysis of SIHA cells using anti-NTN4 antibody. Overlay histogram showing SIHA cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-NTN4 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

NTN4 antibody detects Netrin-4, a secreted extracellular matrix protein that guides axonal growth, angiogenesis, and tissue morphogenesis. The UniProt recommended name is Netrin-4 (NTN4). This laminin-related guidance molecule plays a dual role in promoting or inhibiting cell migration and adhesion depending on receptor context and tissue environment.

Functionally, NTN4 antibody identifies a 628-amino-acid protein secreted into the extracellular space, where it binds to receptors such as UNC5B, DCC, and integrins. NTN4 regulates neuronal guidance during development by controlling axonal attraction and repulsion. Beyond the nervous system, NTN4 influences angiogenesis by modulating endothelial cell proliferation and migration, acting as both a pro- and anti-angiogenic factor in different contexts. NTN4 also contributes to basement membrane organization and vascular permeability regulation.

The NTN4 gene is located on chromosome 12q22 and is expressed in brain, lung, kidney, and vascular tissues. Expression is upregulated during embryonic development, tissue regeneration, and pathological angiogenesis. NTN4 is also found in the extracellular matrix of epithelial and endothelial cells, where it interacts with laminins and collagen IV to maintain structural stability.

Pathologically, altered NTN4 expression is associated with cancer, diabetic retinopathy, and neurodevelopmental disorders. Overexpression can promote tumor growth and angiogenesis, while loss of function leads to impaired vessel formation and axonal misguidance. NTN4 acts as a context-dependent regulator of cellular adhesion, guiding both neural and vascular remodeling. Research using NTN4 antibody supports studies in extracellular matrix biology, neurodevelopment, and angiogenesis.

NTN4 antibody is validated for western blotting, immunohistochemistry, and ELISA to detect secreted matrix proteins. NSJ Bioreagents provides NTN4 antibody reagents optimized for research in neural guidance, vascular development, and extracellular matrix signaling.

Structurally, Netrin-4 consists of a laminin N-terminal domain (LN), three laminin-type epidermal growth factor-like repeats (LE), and a C-terminal NTR domain that mediates receptor interactions. This modular organization enables NTN4 to function as both a structural matrix component and a signaling ligand. This antibody facilitates research into NTN4's roles

in neural patterning, angiogenesis, and tumor microenvironment regulation.

Application Notes

Optimal dilution of the NTN4 antibody should be determined by the researcher.

Immunogen

E.coli-derived human NTN4 recombinant protein (Position: C?) was used as the immunogen for the NTN4 antibody.

Storage

After reconstitution, the NTN4 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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