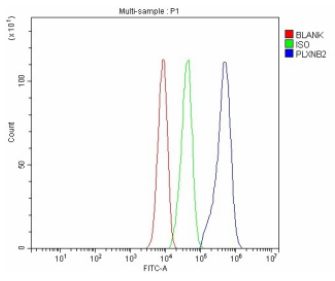
PLXNB2 Antibody / Plexin B2 (FY12156)

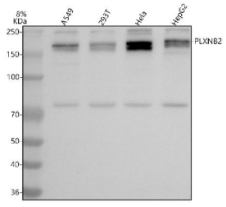
Catalog No.	Formulation	Size
FY12156	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	O15031
Applications	Western Blot: 0.25-0.5ug/ml ELISA: 0.1-0.5ug/ml
Limitations	This PLXNB2 antibody is available for research use only.



Flow Cytometry analysis of HepG2 cells using anti-PLXNB2 antibody. Overlay histogram showing HepG2 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-PLXNB2 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.



Western blot analysis of PLXNB2 using anti-PLXNB2 antibody. Lane 1: human whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: human Hela whole cell lysates, Lane 4: human HepG2 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-PLXNB2 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. A specific band was detected for PLXNB2 at approximately 205 kDa. The expected band size for PLXNB2 is at 205 kDa.

Description

PLXNB2 antibody detects Plexin-B2, encoded by the PLXNB2 gene on chromosome 22q13.31. PLXNB2 antibody is used to study this large single-pass transmembrane receptor that belongs to the plexin family of semaphorin receptors. Plexins mediate signaling triggered by semaphorins, a family of secreted and membrane-bound proteins critical for axon guidance, cell migration, immune regulation, and angiogenesis. PLXNB2 functions prominently in nervous system development, but it also contributes to cancer progression, immune responses, and vascular biology. Its expression is broad, with particularly high levels in the brain, kidney, placenta, and immune tissues.

Structurally, PLXNB2 contains an extracellular sema domain that mediates ligand binding, followed by PSI and IPT domains that facilitate protein interactions. The transmembrane region anchors it in the plasma membrane, while the cytoplasmic domain contains a split GAP (GTPase-activating protein) domain. This GAP activity targets Rho family GTPases, enabling PLXNB2 to regulate actin cytoskeleton remodeling, cell adhesion, and motility. Through associations with receptors such as MET and integrins, PLXNB2 integrates semaphorin signals with growth factor and adhesion signaling networks.

Functionally, PLXNB2 influences diverse biological processes. In the nervous system, PLXNB2 regulates axonal pathfinding and dendritic spine morphogenesis. In immune cells, it modulates migration, activation, and antigen presentation. PLXNB2 also contributes to angiogenesis by coordinating endothelial cell guidance and vessel branching. Knockout studies in mice demonstrate that PLXNB2 deficiency leads to embryonic lethality, underscoring its essential developmental role. Researchers use PLXNB2 antibody to evaluate its contribution to cell guidance, immune regulation, and vascular formation.

Clinically, PLXNB2 is implicated in cancer. Overexpression is observed in glioblastoma, breast cancer, and colorectal cancer, where it promotes invasion, angiogenesis, and resistance to therapy. By interacting with c-MET and other oncogenic signaling pathways, PLXNB2 contributes to tumor progression and poor prognosis. Beyond cancer, mutations in PLXNB2 have been linked to congenital brain malformations and developmental disorders. Elevated PLXNB2 expression is also associated with autoimmune diseases, reflecting its role in immune regulation.

Experimentally, PLXNB2 antibody is applied in western blotting to detect the ~205 kDa protein, in immunohistochemistry to assess tumor and tissue expression, and in immunofluorescence to visualize its localization at the plasma membrane. Immunoprecipitation with PLXNB2 antibody helps identify interacting partners including semaphorins and receptor tyrosine kinases. NSJ Bioreagents supplies PLXNB2 antibody as a validated tool for developmental biology, neuroscience, cancer research, and immunology.

Application Notes

Optimal dilution of the PLXNB2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PLXNB2 recombinant protein (Position: E400-E866) was used as the immunogen for the PLXNB2 antibody.

Storage

After reconstitution, the PLXNB2 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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