Mouse/Rat Plexin B3 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF6879

DESCRIPTION

Species Reactivity	Mouse/Rat
Specificity	Detects mouse and rat Plexin B3 in direct ELISAs and Western blots. In direct ELISAs, approximately 38% cross-reactivity with recombinant human (rh) Plexin B3 is observed, and less than 1% cross-reactivity with rhPlexin B2 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse Plexin B3 His25-Gln1235 Accession # Q9QY40
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

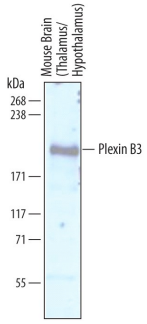
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Flow Cytometry	2.5 µg/10^6 cells	See Below
Immunohistochemistry	5-15 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

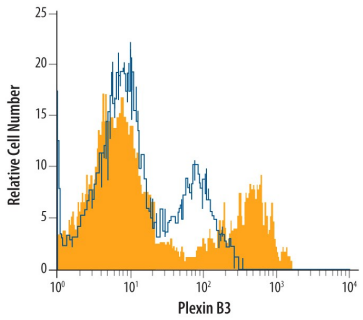
DATA

Western Blot



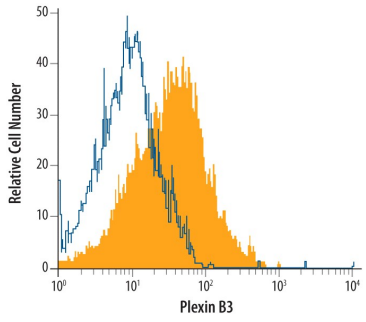
Detection of Mouse Plexin B3 by Western Blot. Western blot shows lysates of mouse brain (thalamus/hypothalamus) tissue. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Mouse/Rat Plexin B3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6879) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Plexin B3 at approximately 180-190 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Flow Cytometry



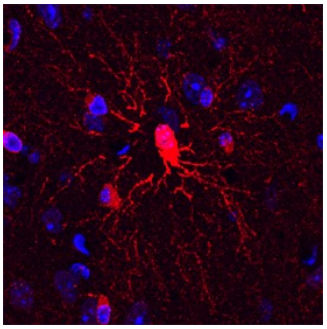
Detection of Plexin B3 in Neuro-2A Mouse Cell Line by Flow Cytometry. Neuro-2A mouse neuroblastoma cell line was stained with Sheep Anti-Mouse/Rat Plexin B3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6879, filled histogram) or isotype control antibody (Catalog # 5-001-A, open histogram), followed by Allophycocyanin-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # F0127).

Flow Cytometry



Detection of Plexin B3 in C6 Rat Cell Line by Flow Cytometry. C6 rat glioma cell line was stained with Sheep Anti-Mouse/Rat Plexin B3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6879, filled histogram) or isotype control antibody (Catalog # 5-001-A, open histogram), followed by Allophycocyanin-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # F0127).

Immunohistochemistry



Plexin B3 in Mouse Brain. Plexin B3 was detected in perfusion fixed frozen sections of mouse brain using Sheep Anti-Mouse/Rat Plexin B3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6879) at 1.7 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to oligodendrocytes. View our protocol for Fluorescent IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Plexin-B3 (also plexin-6) is a 260-270 kDa member of the plexin-B subfamily, plexin family of proteins. It is found on postnatal neurons and oligodendroglia, and appears to have opposing functions. In a context-dependent manner, plexin-B3 may block cell process extension and induce growth cone collapse by binding to Sema5. Conversely, it may engage in homophilic interactions *in trans*, promoting growth cone extension and axon elongation. The HGF receptor Met has been reported to complex with plexin-B3 *in cis*, and this interaction may contribute to its reported opposing effects. Mature mouse plexin-B3 is an 1868 amino acid (aa) type I transmembrane glycoprotein. It contains a 1211 aa extracellular domain (ECD) (aa 25-1892) plus a 636 aa cytoplasmic region. The ECD contains one Sema-domain (aa 25-451), two PSI domains (aa 454-646) and four IPT regions (aa 814-1224). There is one isoform variant that contains an alternative Met start site 10 aa upstream of the standard site. Based on human studies, proteolysis of mouse plexin-B3 likely occurs, generating 160 kDa and 140 kDa ECD fragments. Over aa 25-1235, mouse plexin-B3 shares 95% and 82% aa identity with rat and human plexin-B3, respectively.

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