

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Semaphorin 4B in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant mouse Semaphorin 4B is observed and less than 1% cross-reactivity with recombinant human (rh) Semaphorin 3A, 4A, and 7A is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Semaphorin 4B isoform 1 Leu39-Glu712 Accession # Q9NPR2
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.

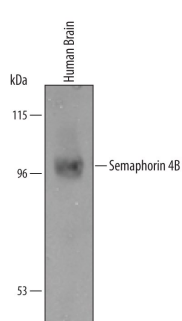
APPLICATIONS

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	0.25 µg/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

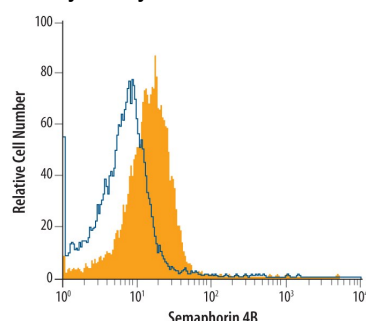
DATA

Western Blot



Detection of Human Semaphorin 4B by Western Blot.
Western blot shows lysates of human brain tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human Semaphorin 4B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5485) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for Semaphorin 4B at approximately 96 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Flow Cytometry



Detection of Semaphorin 4B in THP-1 Human Cell Line by Flow Cytometry.
THP-1 human acute monocytic leukemia cell line was stained with Goat Anti-Human Semaphorin 4B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5485, filled histogram) or isotype control antibody (Catalog # AB-108-C, open histogram), followed by Phycoerythrin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0107).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
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. <ul style="list-style-type: none"> • 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.

BACKGROUND

Semaphorin 4B (Sema4B; also SemaC) is a 95-100 kDa, class IV member of the Semaphorin family of proteins. It is expressed in neurons, and following PSD-95 induced clustering, participates in the formation or functioning of glutamatergic synapses. Mature human Sema4B is a type I transmembrane glycoprotein that is 794 amino acids (aa) in length. It contains a 674 aa extracellular region (aa 39-832) that is characterized by one Sema domain (aa 65-502), a PSI region (aa 520-574), and an Ig-like C2-type domain (aa 599-658). There is one potential soluble splice variant that shows a 29 aa substitution for aa 707-832. Over aa 39-712, human Sema4B shares 86% aa identity with mouse Sema4B.