Human Semaphorin 4C Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF6125

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Semaphorin 4C in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant mouse (rm) Sema4C is observed, and approximately 10% cross-reactivity with recombinant human (rh) Sema4G is observed, and less than 5% cross-reactivity with rhSema3B and rmSema3F is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Semaphorin 4C Ala21-Gly663 Accession # Q9C0C4
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 as a 0.2 μm filtered solution in PBS.

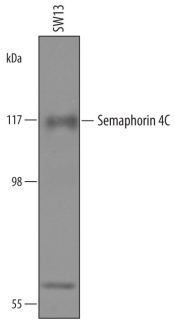
APPLICATIONS

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	0.5 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Simple Western	25 µg/mL	See Below

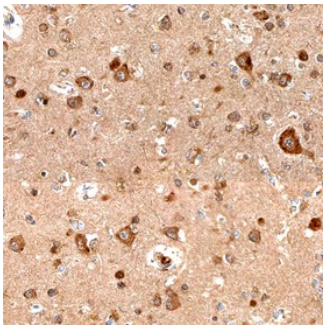
DATA

Western Blot



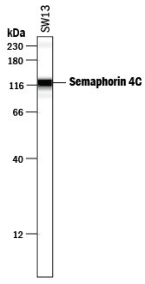
Detection of Human Semaphorin 4C by Western Blot. Western blot shows lysates of SW13 human adrenal cortex adenocarcinoma cell line. PVDF membrane was probed with 0.5 µg/mL of Sheep Anti-Human Semaphorin 4C Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6125) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Semaphorin 4C at approximately 110 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Immunohistochemistry



Semaphorin 4C in Human Brain. Semaphorin 4C was detected in immersion fixed paraffin-embedded sections of human brain (cortex) using Sheep Anti-Human Semaphorin 4C Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6125) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal cell bodies. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Simple Western



Detection of Human Semaphorin 4C by Simple Western™. Simple Western lane view shows lysates of SW13 human adrenal cortex adenocarcinoma cell line, loaded at 0.2 mg/mL. A specific band was detected for Semaphorin 4C at approximately 121 kDa (as indicated) using 25 µg/mL of Sheep Anti-Human Semaphorin 4C Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6125) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system. Non-specific interaction with the 230 kDa Simple Western standard may be seen with this antibody.

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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.** ● 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

Sema4C (Semaphorin 4C; also Sema I and M-SemaF) is a 100-105 kDa, class IV member of the semaphorin family of proteins. It is expressed by precursors to neurons and myocytes, and may regulate their differentiation into mature forms. Mature human Sema4C is a type I transmembrane glycoprotein that is 813 amino acids (aa) in length. It contains a 643 aa extracellular region (aa 21-663) that is characterized by the presence of one Sema domain (aa 30-497), a PSI region (aa 499-551), and an Ig-like C2-type domain (aa 556-644). The cytoplasmic region interacts with PZD-domain containing proteins. There are three potential splice variants. One demonstrates an alternative start site at Met324, a second shows a deletion of aa 173-211, and a third contains an 89 aa substitution for aa 1-36. Over aa 21-663, human Sema4C shares 85% aa identity with mouse Sema4C.

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