

DESCRIPTION

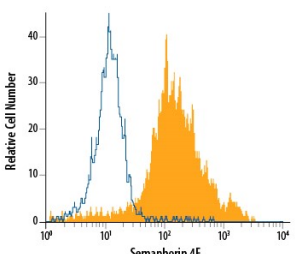
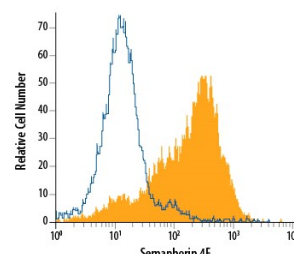
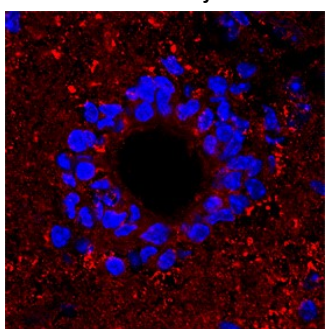
Species Reactivity	Mouse
Specificity	Detects mouse Sema-4F in ELISAs.
Source	Monoclonal Rat IgG _{2A} Clone # 780225
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Sema-4F Arg41-Gly667 Accession # Q9Z123
Formulation	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
Flow Cytometry	2.5 µL/10 ⁶ cells	See Below
Immunohistochemistry	8-25 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

<p>Flow Cytometry</p>  <p>Detection of Semaphorin 4F in Mouse Cortical Stem Cells by Flow Cytometry. Mouse cortical stem cells were stained with Rat Anti-Mouse Semaphorin 4F Monoclonal Antibody (Catalog # MAB7200, filled histogram) or isotype control antibody (Catalog # MAB006, open histogram), followed by Allophycocyanin-conjugated Anti-Rat IgG Secondary Antibody (Catalog # F0113).</p>	<p>Flow Cytometry</p>  <p>Detection of Semaphorin 4F in bEnd.3 Mouse Cell Line by Flow Cytometry. bEnd.3 mouse endothelioma cell line was stained with Rat Anti-Mouse Semaphorin 4F Monoclonal Antibody (Catalog # MAB7200, filled histogram) or isotype control antibody (Catalog # MAB006, open histogram), followed by Allophycocyanin-conjugated Anti-Rat IgG Secondary Antibody (Catalog # F0113).</p>
<p>Immunohistochemistry</p>  <p>Semaphorin 4F in Mouse Spinal Cord. Semaphorin 4F was detected in perfusion fixed frozen sections of mouse spinal cord using Rat Anti-Mouse Semaphorin 4F Monoclonal Antibody (Catalog # MAB7200) at 25 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to synaptic puncta. View our protocol for Fluorescent IHC Staining of Frozen Tissue Sections.</p>	

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 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. <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 4F (Sema4F; also Sema W) is a 90-100 kDa, class IV member of the semaphorin family of proteins. It is expressed by select cell types, including Schwann cells and neurons, and likely acts as an inhibitor of cell proliferation by Schwann cells, and a regulator of postsynaptic glutamatergic synapses on neuron dendrites. Mature mouse Sema4F is a type I transmembrane protein that is 737 amino acids (aa) in length. It contains a 627 aa extracellular region (aa 41-667) that is characterized by the presence of one Sema domain (aa 71-493), a PSI region (aa 518-569), and a C2-type Ig-like domain (aa 586-641). Over aa 41-667, mouse Sema4F shares 92% and 98% aa identity with human and rat Sema4F, respectively.