

DESCRIPTION

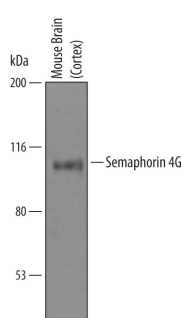
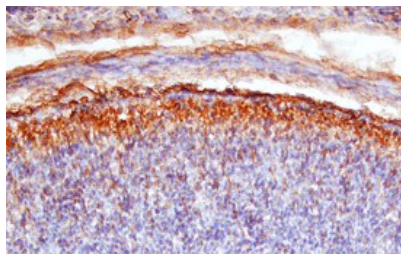
Species Reactivity	Mouse
Specificity	Detects mouse Semaphorin 4G in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant human Semaphorin 4G is observed, and less than 1% cross-reactivity with recombinant mouse (rm) Semaphorin 4B, rmSemaphorin 4C, and rmSemaphorin 4F is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Semaphorin 4G Val18-Met673 Accession # Q9WUH7
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	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Mouse Semaphorin 4G by Western Blot. Western blot shows lysates of mouse brain (cortex) tissue. PVDF Membrane was probed with 1 µg/mL of Sheep Anti-Mouse Semaphorin 4G Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6504) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Semaphorin 4G at approximately 110 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1</p>	<p>Immunohistochemistry</p>  <p>Semaphorin 4G in Mouse Embryo. Semaphorin 4G was detected in immersion fixed frozen sections of mouse embryo (15 d.p.c.) using Sheep Anti-Mouse Semaphorin 4G Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6504) at 15 µg/mL overnight at 4 °C. 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 developing brain (cortex) and connective tissue. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.</p>
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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. <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 4G (Sema4G) is a 92 kDa (predicted), class IV member of the semaphorin family of proteins. It is expressed by select cell types, including oligodendroglia and Purkinje neurons, and likely acts as a chemorepellent by binding to B-type plexins. Mature mouse Sema4G is a type I transmembrane protein that is 820 amino acids (aa) in length. It contains a 656 aa extracellular region (aa 18-673) that is characterized by one Sema domain (aa 35-503), a PSI region (aa 505-556), and an Ig-like C2-type domain (aa 565-648). The 143 aa cytoplasmic region contains a poly-proline segment and a Ser phosphorylation site. Over aa 18-673, mouse Sema4G shares 91% and 97% aa identity with human and rat Sema4G, respectively.