

DESCRIPTION

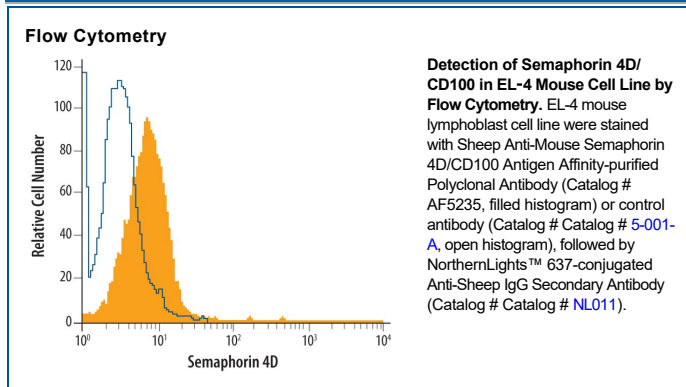
Species Reactivity	Mouse
Specificity	Detects mouse Semaphorin 4D/CD100 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant human (rh) Semaphorin 3A, rhSemaphorin 4B, and rhSemaphorin 6C is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Semaphorin 4D/CD100 Phe24-Thr657 Accession # NP_038688
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

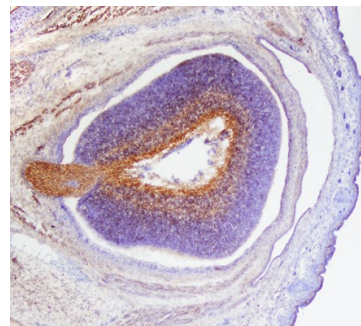
Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse Semaphorin 4D/CD100
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



Immunohistochemistry



Semaphorin 4D/CD100 in Mouse Embryo Tissue. Semaphorin 4D/CD100 was detected in immersion fixed frozen sections of mouse embryonic eye cup (15 d.p.c.) using Sheep Anti-Mouse Semaphorin 4D/CD100 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5235) 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 cytoplasm. View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

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 4D (Sema4D/CD100, previously sem J, G or C-like 2) is a widely expressed 150 kDa type I transmembrane glycoprotein of the Class 4 Semaphorin family with activity in the immune and nervous systems. The 861 amino acid (aa) Sema4D contains a 710 aa extracellular domain (ECD) with a sema domain and an immunoglobulin-like domain. Within the ECD region used as an immunogen, mouse Sema4D shares 87% and 93% aa identity with human and rat Sema4D, respectively. A soluble, active 120 kDa form is produced proteolytically upon activation of B and T cells. Sema4D binds Plexin-B1, but also CD72 on B and dendritic cells. In developing neurons, Sema-4D assists in guidance. Sema4D is proangiogenic when expressed by tumor-associated macrophages.