

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Semaphorin 4D in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant mouse Semaphorin 3F is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 547406
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Semaphorin 4D Phe24-Thr657 Accession # NP_038688
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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) Semaphorin 4D 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 Semaphorin 4D shares 87% and 93% aa identity with human and rat Semaphorin 4D, respectively. A soluble, active 120 kDa form is produced proteolytically upon activation of B and T cells. Semaphorin 4D binds Plexin B1, but also CD72 on B and dendritic cells. In developing neurons, Semaphorin 4D assists in guidance. Semaphorin 4D is proangiogenic when expressed by tumor-associated macrophages.

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