

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Semaphorin 4D/CD100 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human Semaphorin 4B, 4C, 4G, or recombinant mouse Semaphorin 4D is observed. In Western blots, no cross-reactivity with rhSemaphorin 4A, 6A, or 6C is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 758726
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Semaphorin 4D/CD100 Met22-Arg734 Accession # Q92854
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10 ⁶ cells	Jurkat human acute T cell leukemia cell line

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. <ul style="list-style-type: none"> 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 CD72 on B and dendritic cells and Plexin B1 elsewhere. In developing neurons, Semaphorin 4D assists in guidance. Semaphorin 4D is proangiogenic when expressed by tumor-associated macrophages.

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