

Mouse Semaphorin 4D/CD100 Antibody

Monoclonal Rat IgG_{2B} Clone # 547412 Catalog Number: MAB52351

DESCRIPTION

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Species Reactivity	Mouse	
Specificity	Detects mouse Semaphorin 4D/CD100 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human Semaphorin 3A, 3B, 3C, 3D, 3E, 3F, 4A, 4B, 4C, 4D, 4G, 5A, 5B, 6A, 6B, 6C, 6D, or 7A is observed.	
Source	Monoclonal Rat IgG _{2B} Clone # 547412	
Purification	Protein A or G purified from hybridoma culture supernatant	
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

DATA

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 Sample Concentration
Flow Cytometry	2.5 μg/10 ⁶ cells See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.



Semaphorin 4D/CD100 in Mouse Splenocytes by Flow Cytometry. Mouse splenocytes were stained with Mouse Semaphorin 4D/CD100 Monoclonal Antibody (Catalog # MAB02351, filled histogram) or isotype control antibody (Catalog # MAB0061, open histogram), followed by Phycoerythrin-conjugated Anti-Rat IgG F(ab')₂ Secondary Antibody (Catalog # F0105B).

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. 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.

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