10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

SEMA4D Rabbit mAb

Catalog # AP76067

Product Information

Application	WB, IHC-P
Primary Accession	Q92854
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	96150

Additional Information

Gene ID	10507
Other Names	SEMA4D
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

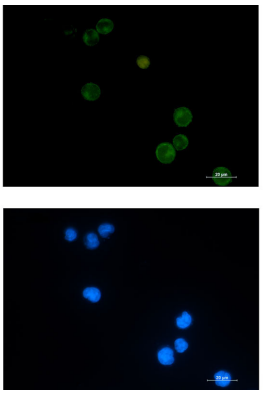
Name	SEMA4D
Synonyms	C9orf164, CD100, SEMAJ
Function	Cell surface receptor for PLXNB1 and PLXNB2 that plays an important role in cell-cell signaling (PubMed:20877282). Regulates GABAergic synapse development (By similarity). Promotes the development of inhibitory synapses in a PLXNB1-dependent manner (By similarity). Modulates the complexity and arborization of developing neurites in hippocampal neurons by activating PLXNB1 and interaction with PLXNB1 mediates activation of RHOA (PubMed:19788569). Promotes the migration of cerebellar granule cells (PubMed:16055703). Plays a role in the immune system; induces B-cells to aggregate and improves their viability (in vitro) (PubMed:8876214). Induces endothelial cell migration through the activation of PTK2B/PYK2, SRC, and the phosphatidylinositol 3-kinase-AKT pathway (PubMed:16055703).
Cellular Location	Cell membrane; Single-pass type I membrane protein

Tissue Location	Strongly expressed in skeletal muscle, peripheral blood lymphocytes, spleen, and thymus and also expressed at lower levels in testes, brain, kidney, small intestine, prostate, heart, placenta, lung and pancreas, but not in colon and liver

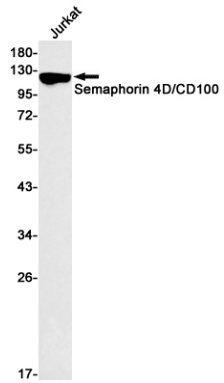
Background

Plexin-B1 is related to axon guidance in the central nervous system. The Sema4D function is also widely detected in the immune system and was found to be the first semaphorin expressed on the surface of many types of immune cells. In the immune system, CD72 is a low-affinity receptor for Sema4D, and studies have shown that Sema4D can not only regulate T cell activation, but also participate in the regulation of B cell survival and differentiation. In the immune system, soluble fragments containing extracellular domains produced by proteolytic cleavage can regulate many physiological functions of Sema4D. Sema4D is also associated with tumorigenesis because studies have confirmed that it is overexpressed in various types of solid tumor cells. To some extent, the role of Sema4D in tumorigenesis is related to its ability to cause tumor angiogenesis, cell invasion, and immunosuppression by enhancing bone marrow-derived suppressor cell function.

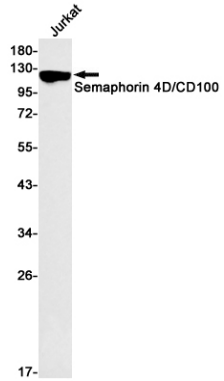
Images



Immunocytochemistry analysis of Semaphorin 4D (green) in Jurkat using Semaphorin 4D antibody,and DAPI(blue).



Western blot analysis of Semaphorin 4D/CD100 in Jurkat lysates using Semaphorin 4D/CD100 antibody.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.