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CD100 (Semaphorin-4D) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone SEMA4D/933]
Catalog # AH11061

Product Information

Application	IF, FC
Primary Accession	Q92854
Other Accession	10507, 494406
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	SEMA4D/933
Calculated MW	96150

Additional Information

Gene ID	10507
Other Names	Semaphorin-4D, A8, BB18, GR3, CD100, SEMA4D, C9orf164, CD100, SEMAJ
Application Note	IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	CD100 (Semaphorin-4D) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

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

Recognizes a homodimeric protein comprised of 50kDa subunits, identified as CD100. It is expressed on majority of haemopoietic cells (B, T, NK and myeloid cells) and is absent from bone marrow, erythrocytes, eosinophils and endothelial cells. Its expression is increased after PHA-activation. CD100 was shown to associate with different partner molecules in T cells such as CD45, a key molecule with protein tyrosine phosphatase activity involved in T-cell transduction, and a Serine kinase. It plays a role in homotypic cell adhesion and in T cell activation.

References

Schlossman SL Bloumsell W Gilks et al. eds. 1995. Leucocyte Typing V: White Cell Differentiation Antigens. Oxford University Press New York. | Knapp WB Dorken EP. Rieber et al, eds. 1989. Leucocyte Typing IV: White Cell Differentiation Antigens. Oxford University Press New York