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

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

Mouse Monoclonal Antibody [Clone 133-1C6]
Catalog # AH11057

Product Information

Application	IF, FC
Primary Accession	Q92854
Other Accession	10507, 494406
Reactivity	Human, Baboon
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgM, kappa
Clone Names	133-1C6
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 (Workshop VI; Code N-L026). 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

Kishimoto T et al. (eds) Leukocyte Typing VI, Garland Publishing, New York, 1997. | Schlossman SF et al. (eds) Leucocyte Typing V Oxford University Press, Oxford. 1995. | Delaire S et al. CD100 is a leukocyte semaphorin. Cell Mol Life Sci 1998, 54(11):1265-1276. | Dorfman DM et al. The leukocyte semaphorin CD100 is expressed in most T-cell, but few B-cell, non-Hodgkin's lymphomas. Am J Pathol 1998, 153(1):255-262. | Herold C et al. CD100 is associated with CD45 at the surface of human T lymphocytes. Role in T cell homotypic adhesion. J Immunol 1996, 157(12):5262-5268. | Elhabazi A et al. The human semaphorin-like leukocyte cell surface molecule CD100 associates with a serine kinase activity. J Biol Chem 1997, 272(38):23515-23520. | Hall KT et al. Human CD100, a novel leukocyte semaphorin that promotes B-cell aggregation and differentiation. Proc Natl Acad Sci USA 1996, 93(21):11780-1178

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