

KO453

For research use only

Anti Mouse Semaphorin 4D (CD100) Monoclonal Antibody

Clone No. SK-3

Code No.	KO453
Target	Semaphorin 4D
Category	Neuroscience
Gene ID	20354
Primary Source	MGI:109244
Synonyms	CD100; Semaj; Semcl2; coll-4; Semacl2; Sema4d
Type	Monoclonal Antibody
Immunogen	Recombinant protein of Mouse Semaphorin 4D extracellular domain
Raised in	Sema4D deficient mouse
Myeloma	P3U1
Clone number	SK-3
Purification	ProteinG
Source	Serum-free medium
Isotype	IgG1κ
Cross Reactivity	Human
Label	Unlabeled
Concentration	0.25 mg/mL
Contents (Volume)	25 µg (100 µL/vial)
Buffer	PBS [containing 2% Block Ace as a stabilizer, 0.1% Proclin as a bacteriostat]
Storage	Store below -20°C. Once thawed, store at 4°C. Repeated freeze-thaw cycles should be avoided.
Application	ELISA,IP,FCM

ELISA	WB	IHC	ICC
1-10	Not tested	Not tested	Not tested
IP	FCM	IF	Neutralization
5	0.05	Not tested	Not tested

(µg/mL)

Reference

1. Kumanogoh A, et al. Identification of CD72 as a lymphocyte receptor for the class IV semaphorin CD100: a novel mechanism for regulating B cell signaling. *Immunity*. 2000 Nov;13(5):621-31.
2. Kumanogoh A, et al. Requirement for the lymphocyte semaphorin, CD100, in the induction of antigen-specific T cells and the maturation of dendritic cells. *J Immunol*. 2002 Aug 1;169(3):1175-81.
3. Kumanogoh A, et al. Requirement for CD100-CD72 interactions in fine-tuning of B-cell antigen receptor signaling and homeostatic maintenance of the B-cell compartment. *Int Immunol*. 2005 Oct;17(10):1277-82.

UniPlot Summary

Semaphorins are a family of phylogenetically conserved soluble and transmembrane proteins. Semaphorins were originally identified as axon guidance factors during neuronal development. Semaphorins are now known to be widely expressed mediators that play significant roles in immune responses and organ morphogenesis.

Sema4D (also known as CD100) is a 150-kDa transmembrane protein of the class IV semaphorin subfamily. Sema4D is expressed at high levels in lymphoid organs, including the spleen, thymus, and lymph nodes, and in non-lymphoid organs, such as the brain, heart, and kidney. In lymphoid organs, Sema4D is expressed abundantly by T cells but weakly by B cells. Its expression is significantly enhanced in both T and B cells, following their respective activation.

Sema4D is proteolytically cleaved from their transmembrane form to generate 120-kDa soluble forms. Two types of receptors, Plexin-B1 and CD72, have been identified for soluble Sema4D.