

Recombinant Human SEMA4D protein, Fc-tagged

Cat. No. SEMA4D-513H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human SEMA4D protein (Met22-Arg734), fused to human IgG1 Fc tag at C-terminus, was expressed in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	713
Description	Cluster of Differentiation 100 (CD100) is also known as Semaphorin-4D (SEMA4D), is a single-pass type I membrane protein which belongs to the semaphorin family, and is a human 150-kDa homodimer expressed at the surface of most hemopoietic cells. Semaphorin genes encode soluble and membrane-bound proteins, most of which have been shown to act as chemorepellents on growth cone guidance. CD100 is discrete, as it is a transmembrane leukocyte surface molecule that can also exist in a soluble form. Semaphorin 4D (Sema 4D) is an axon guidance molecule which is secreted by oligodendrocytes and induces growth cone collapse in the central nervous system. By binding plexin B1 receptor it functions as an R-Ras GTPase-activating protein (GAP) and repels axon growth cones in both the mature central nervous system. In the immune system, CD100 binds CD72 to activate B cells and dendritic cells, though much about this interaction is still under investigation. It is involved in oligodendrogenesis during development and during recovery from ischemic injury.

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Form	Lyophilized from 0.22 um filtered solution in 50 mM Tris, 100 mM Glycine, pH7.5. Normally trehalose is added as protectant before lyophilization.
Molecular Mass	The protein has a calculated MW of 105.4 kDa. The protein migrates as 125-160 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Endotoxin	Less than 1.0 EU per ug by the LAL method.
Purity	>95% as determined by SDS-PAGE.
Storage	For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. This product is stable after storage at: -20 centigrade to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name	SEMA4D
Official Symbol	SEMA4D
Synonyms	SEMA4D; sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 4D; C9orf164, chromosome 9 open reading frame 164 , SEMAJ; semaphorin-4D; CD100; coll 4; FLJ39737; M sema G; A8; GR3; BB18; sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, 4D; SEMAJ; coll-4; C9orf164; M-sema-G;

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FLJ33485; FLJ34282; FLJ46484; MGC169138; MGC169141

Gene ID 10507

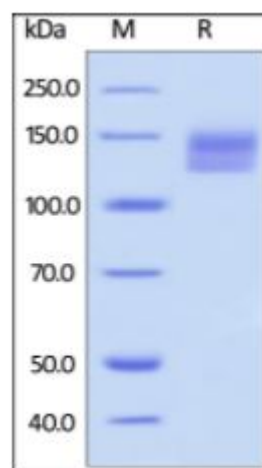
mRNA Refseq NM_001142287

Protein Refseq NP_001135759

MIM 601866

UniProt ID Q92854

**SDS-PAGE of
SEMA4D-513H**



Human SEMA4D, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

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