

SEMA4A recombinant protein

SEMA4A Protein, Human, Recombinant (His Tag)

CATALOG #
AAA257991

HOST
HEK293 Cells

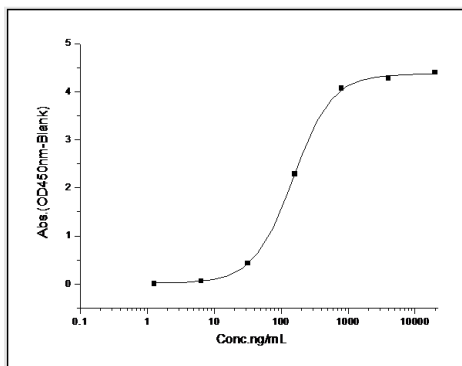
PRODUCT SYNONYMS

SEMA4A; SEMA4A Protein; Human; Recombinant (His Tag); Human Semaphorin 4A/SEMA4A/Semaphorin B Protein (His Tag); CORD10 Protein; RP35 Protein; SEMAB Protein; SEMB Protein; semaphorin 4A; SEMA4A recombinant protein

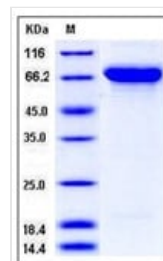
PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>95% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Sequence	Met1-His68 3
Species	Human
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Gly 32
Tag	C-His
Protein Construction	A DNA sequence encoding the human SEMA4A (NP_071762.2) extracellular domain (Met 1-His 683) was expressed, with a polyhistidine tag at the C-terminus.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.

IMAGES



SDS-PAGE



Application Data

Measured by its ability to bind biotinylated mouse SEMA4D in a functional ELISA.

ADDITIONAL INFORMATION

Related Product Information for SEMA4A recombinant protein	Background: Semaphorin-4A, also known as Semaphorin-B, SEMA4A, Sema B and SEMAB, is a single-pass type I membrane protein that belongs to the semaphorin family. It inhibits axonal extension by providing local signals to specify territories inaccessible for growing axons. Semaphorin-4A/SEMA4A contains one Ig-like C2-type (immunoglobulin-like) domain, one PSI domain and one Sema domain. Defects in SEMA4A are the cause of retinitis pigmentosa type 35 (RP35) which leads to degeneration of retinal photoreceptor cells. Patients typically have night vision blindness and loss of mid-peripheral visual field. As their condition progresses, they lose their far peripheral visual field and eventually central vision as well. Defects in SEMA4A are also the cause of cone-rod dystrophy type 1 (CORD1) which are inherited retinal dystrophies belonging to the group of pigmentary retinopathies. CORDs are characterized by retinal pigment deposits visible on fundus examination, predominantly in the macular region, and initial loss of cone photoreceptors followed by rod degeneration. Semaphorins are secreted, transmembrane, and GPI-linked proteins, defined by cysteine-rich semaphorin protein domains, that have important roles in a variety of tissues. Humans have 2 semaphorins, Drosophila has five, and two are known from DNA viruses. Semaphorins are found in nematodes and crustaceans but not in non-animals. They are grouped into eight classes on the basis of phylogenetic tree analyses and the presence of additional protein motifs. Semaphorins have been implicated in diverse developmental processes such as axon guidance during nervous system development and regulation of cell migration.
References	Clark H.F., et al., 2003, Genome Res. 13: 2265-2270. Ota T., et al., 2004,Nat. Genet. 36: 40-45. Neufeld, G. et al., 2005, Front Biosci. 10 : 751-60. Fiore,R. et al., 2005, Mol Cell Biol. 25 (6):2310-9. Abid A., et al., 2006, J. Med. Genet. 43:378-381.

NCBI AND UNIPROT INFORMATION

NCBI GI #	21361914
NCBI GeneID	64218
NCBI Accession #	NP_071762.2
NCBI GenBank Nucleotide #	NM_022367.3
UniProt Accession #	Q9H3S1; Q5TCI5; Q5TCJ6; Q8WUA9; B2RDH8; B3KR76
Molecular Weight	69,104 Da
NCBI Official Full Name	semaphorin-4A isoform 1
NCBI Official Synonym Full Names	semaphorin 4A
NCBI Official Symbol	SEMA4A
NCBI Official Synonym Symbols	RP35; SEMB; SEMAB; CORD10
NCBI Protein Information	semaphorin-4A
UniProt Protein Name	Semaphorin-4A
UniProt Gene Name	SEMA4A
UniProt Synonym Gene Names	SEMAB; SEMB; Sema B
UniProt Entry Name	SEM4A_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.