

Recombinant Mouse Semaphorin 3A/SEMA3A Protein (Fc Tag)

Catalog No. PKSM040574

Note: Centrifuge before opening to ensure complete recovery of vial contents.

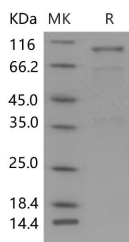
Description

Synonyms	coll-1;Hsema-I;SEMA1;Semad;SemD
Species	Mouse
Expression Host	HEK293 Cells
Sequence	Lys 26-Phe 546
Accession	O08665
Calculated Molecular Weight	87.7 kDa
Observed molecular weight	100 kDa
Tag	N-hFc
Bioactivity	Not validated for activity

Properties

Purity	> 80 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 80 % as determined by reducing SDS-PAGE.

Background

Semaphorins are a family of secreted and cell-bound signaling molecules defined by the presence of a common 500 aa Sema domain. They are best characterized in relation to axon guidance during development of the nervous system. The

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functions of Semaphorins 3A (SEMA3A) are mediated primarily through binding to the Neuropilin-1 (Npn-1) and Plexin-A1 coreceptor complex. Neuropilins lack a signaling-competent cytoplasmic domain and ensure semaphorin binding, whereas the transmembrane receptor plexin mediates the intracellular response. As the first identified vertebrate semaphorin, SEMA3A functions either as a chemorepulsive agent inhibiting axonal outgrowth, or as a chemoattractive agent stimulating the growth of apical dendrites. In both cases, the protein is vital for normal neuronal pattern development. Its overexpression is associated with schizophrenia which is seen in various human tumor cell lines, and aberrant release is associated with the progression of Alzheimer's disease