Mouse Semaphorin 3A / SEMA3A Protein (Fc Tag)

Catalog Number: **50631-M01H**

General Information

Gene Name Synonym:

coll-1; Hsema-I; SEMA1; Semad; SemD

Protein Construction:

A DNA sequence encoding the N-terminal fragment (Lys 26-Phe 546) of mouse SEMA3A (O08665) was fused with the Fc region of human IgG1 at the N-terminus.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 80 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Glu

Molecular Mass:

The recombinant mouse SEMA3A/Fc is a disulfide-linked homodimer The reduced monomer consists of 781 amino acids and has a predicted molecular mass of 87.7 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rm SEMA3A/Fc monomer is approximately 100 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

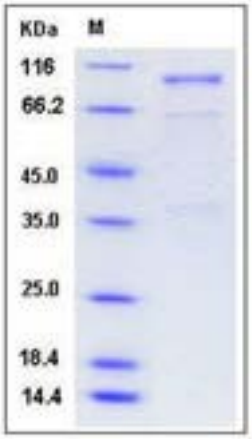
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 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 cytoplasetmic 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

References

1.Giordano,A. et al., 2003, J Neurocytol.32(4):345-352. 2.Good, P. F. et al., 2005, J. Neurochem.91(3): 716-736. 3.Gu, C. et al., 2005, Science.307(5707): 265–268.