Mouse Semaphorin 3A / SEMA3A Protein (His Tag)

Catalog Number: **50631-M07H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

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

Protein Construction:

A DNA sequence encoding the mouse SEMA3A (NP_006071.1) (Lys26-Phe546) was expressed with a polyhistidine tag at the N-terminus.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE.

Endotoxin:

< 1.0 EU per μg 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: His

Molecular Mass:

The recombinant mouse SEMA3A consists 540 amino acids and predicts a molecular mass of 61.6 kDa.

Formulation:

Lyophilized from sterile 20 mM Tris, 150 mM NaCl, 100 mM Argine, 100 mM glutamic acid, pH 8.5.

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:

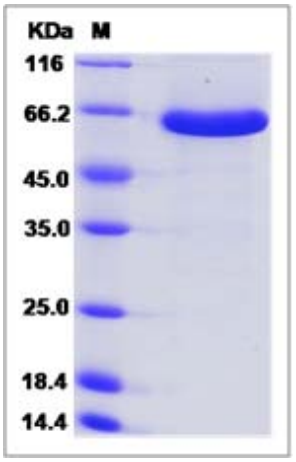
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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.