

# Human SEMA3A Protein

Cat. No. SEM-HM13A

## Description

<b>Source</b>	Recombinant Human SEMA3A Protein is expressed from HEK293 with His tag at the N-Terminus. It contains Asn21-Val771.
<b>Accession</b>	Q14563
<b>Molecular Weight</b>	The protein has a predicted MW of 87.7 kDa. Due to cleavage site, the protein migrates to 60-70 kDa based on Tris-Bis PAGE result.
<b>Endotoxin</b>	Less than 1EU per µg by the LAL method.
<b>Purity</b>	> 95% as determined by Tris-Bis PAGE

## Formulation and Storage

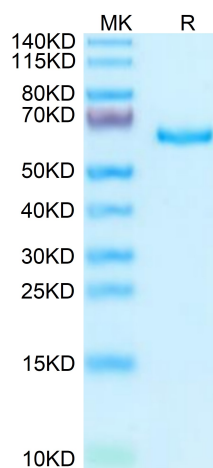
<b>Formulation</b>	Lyophilized from 0.22µm filtered solution in PBS, 200mM L-arginine (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 µg/ml is recommended. Dissolve the lyophilized protein in distilled water.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3-6 months after reconstitution. 2-8°C for 2-7 days after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

The CRMP proteins were originally identified as mediators of Sema3A signaling and neuronal differentiation. Much has been learned about the mechanism by which CRMPs regulate cellular responses to Sema3A. The secreted protein Sema3A (collapsin-1) was the first identified vertebrate semaphorin. Sema3A acts primarily as a repulsive axon guidance cue, and can cause a dramatic collapse of the growth cone lamellipodium. Neuropilin-1 (NP1) and members of the class A plexins (PlexA) form a Sema3A receptor complex, with NP1 serving as a high-affinity ligand binding partner, and PlexA transducing the signal into the cell via its large intracellular domain.

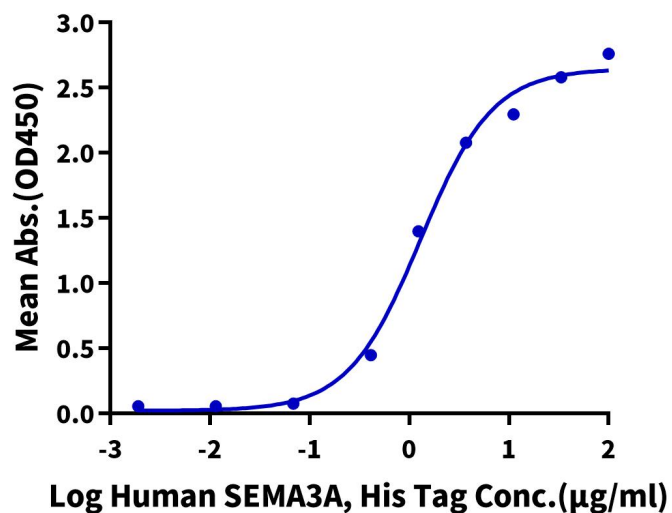
## Assay Data

### Tris-Bis PAGE



Human SEMA3A on Tris-Bis PAGE under reduced condition. The purity is greater than 95%.

### ELISA Data

**Human SEMA3A, His Tag ELISA**0.5 $\mu$ g Anti-SEMA3A Antibody, hFc Tag Per Well

Immobilized Anti-SEMA3A Antibody at 5 $\mu$ g/ml (100 $\mu$ l/well) on the plate. Dose response curve for Human SEMA3A, His Tag with the EC<sub>50</sub> of 1.30 $\mu$ g/ml determined by ELISA.