

Human SEMA3A/Semaphorin-3A Protein

Cat. No. SEM-HM13A

Description

Source	Recombinant Human SEMA3A/Semaphorin-3A Protein is expressed from HEK293 with His tag at the N-Terminus. It contains Asn21-Val771.
Accession	Q14563
Molecular Weight	The protein has a predicted MW of 87.7 kDa. Due to furin cleavage site, the protein migrates to 60-70 kDa based on Bis-Tris PAGE result.
Endotoxin	Less than 1EU per μg by the LAL method.
Purity	> 95% as determined by Bis-Tris PAGE

Formulation and Storage

Formulation	Lyophilized from 0.22 μm filtered solution in PBS, 200mM L-arginine (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
Reconstitution	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 $\mu\text{g}/\text{ml}$ is recommended. Dissolve the lyophilized protein in distilled water.
Storage	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months 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.

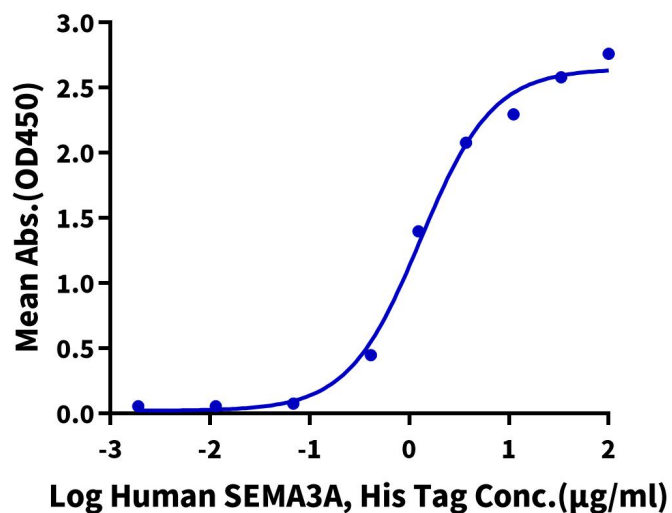
Assay Data

Bis-Tris PAGE



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

ELISA Data

Human SEMA3A, His Tag ELISA0.5 μ g Anti-SEMA3A Antibody, hFc Tag Per Well

Immobilized Anti-SEMA3A Antibody at 5 μ g/ml (100 μ l/well) on the plate. Dose response curve for Human SEMA3A, His Tag with the EC₅₀ of 1.30 μ g/ml determined by ELISA.