

## SEMA3A Protein, Human, Recombinant (His & Flag)

### General Information

Synonyms:	Hsema-III;SemD;SEMA3A;Semaphorin III;SEMAD;Hsema-I;Sema III;SEMA1;coll-1
Protein Construction:	Lys26-Phe546
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q14563
Molecular Weight:	70-75 KDa (reducing condition)
AA Sequence:	Lys26-Phe546

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. Greater than 95% as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris-HCl, 10% Trehalose, 100 mM NaCl, 0.05% Tween 80, pH 8.5.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months.

Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

semaphorin-3A is a secreted protein which belongs to the semaphorin family. Semaphorins are a family of secreted and cell-bound signaling molecules defined by the presence of a common 500 aa Sema domain. This protein can function as either 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

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development. Increased expression of this protein is associated with schizophrenia and is seen in a variety of human tumor cell lines.

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