

## SEMA5A Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	5930434A13;serpin peptidase inhibitor, clade F;9130201M22Rik;semF;AI464145;Semaf
Protein Construction:	A DNA sequence encoding the mouse SEMA5A (Q3UPZ0) (Met1-Thr765) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Pro 22
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q3UPZ0
Molecular Weight:	85.1 kDa (predicted); 96 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE
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 PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

Reconstitution:	A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. 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.
Shipping:	In general, Lyophilized powders are shipping with blue ice.

### Protein Background

Semaphorins are secreted, transmembrane, and GPI-linked proteins, defined by cysteine-rich semaphorin protein domains, that have important roles in a variety of tissues. Humans have 2 semaphorins, Drosophila has five, and two are known from DNA viruses. Semaphorins are found in nematodes and crustaceans but not in non-animals. They are grouped into eight classes on the basis of phylogenetic tree analyses and the presence of additional protein motifs. Semaphorins have been implicated in diverse developmental processes such as axon guidance

during nervous system development and regulation of cell migration. Semaphorin-5A, also known as Semaphorin-F, Sema F, SEMA5A and SEMAF, is a single-pass type I membrane protein that belongs to the semaphorin family. Semaphorin5A / SEMA5A contains one PSI domain, one Sema domain and seven TSP type-1 domains. It may act as positive axonal guidance cues. Semaphorin5A / SEMA5A is an axon regulator molecule and plays major roles during neuronal and vascular development. It plays an essential role in embryonic development. Semaphorin5A / SEMA5A induces endothelial cell migration from pre-existing vessels. It also plays a role in autism, reducing the ability of neurons to form connections with other neurons in certain brain regions.

### Reference

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