

**Synonym**

SEMA4A, SEMAB, SEMB, Semaphorin-4A, Semaphorin-B

**Source**

Human Semaphorin 4A, His Tag (SEA-H5224) is expressed from human 293 cells (HEK293). It contains AA Gly 33 - His 683 (Accession # AAH20974).

Predicted N-terminus: Gly 33

**Molecular Characterization**

SEMA4A(Gly 33 - His 683) AAH20974	Poly-his
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This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 72.7 kDa. The protein migrates as 70-80 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**Purity**

&gt;95% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

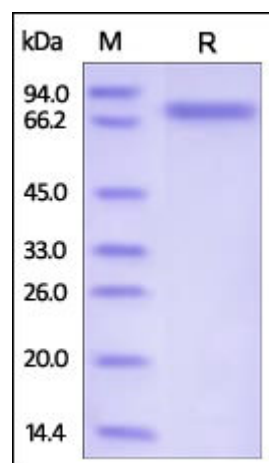
*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.***Storage**

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

No activity loss was observed after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**

Human Semaphorin 4A, His Tag on SDS-PAGE under reducing (R) condition.

The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

**Background**

Semaphorin-4A (SEMA4A) is also known as Semaphorin-B (SEMAB), which belongs to the semaphorin family. SEMA4A contains one Ig-like C2-type (immunoglobulin-like) domain, one PSI domain and one sema domain. SEMA4A is cell surface receptor for PLXNB1, PLXNB2, PLXNB3 and PLXND1 that plays an important role in cell-cell signaling. SEMA4A plays a role in priming antigen-specific T-cells, promotes differentiation of Th1 T-helper cells, and thereby contributes to adaptive immunity. SEMA4A also promotes phosphorylation of TIMD2 and inhibits angiogenesis. SEMA4A promotes axon growth cone collapse and inhibits axonal extension by providing local signals to specify territories inaccessible for growing axons.

## References

(1) [Abid A., et al., 2006, J. Med. Genet. 43:378-381.](#)

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.