## Recombinant Human Semaphorin 5A/SEMA5A Protein (aa 23-765, His Tag)

Catalog Number: PKSH033024



| Description         |  |
|---------------------|--|
| Species             | Human  |
| Mol_Mass            | 84.7 kDa   |
| Accession           | Q13591   |
| <b>Bio-activity</b> | Not validated for activity   |
| Properties          |  |
| Purity              | > 95 % as determined by reducing SDS-PAGE.   |
| Endotoxin           | < 1.0 EU per µg of the protein as determined by the LAL method.                          |
| Storage             | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 |
|                     | °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of      |
|                     | reconstituted samples are stable at $< -20^{\circ}$ C for 3 months.                      |
| Shipping            | This product is provided as lyophilized powder which is shipped with ice packs.          |
| Formulation         | Lyophilized from a 0.2 µm filtered solution of 20mM PB, 150mM NaCl, pH 7.4.              |
|                     | Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants         |
|                     | before lyophilization.   |
|                     | Please refer to the specific buffer information in the printed manual.                   |
| Reconstitution      | Please refer to the printed manual for detailed information.                             |

Note: Centrifuge before opening to ensure complete recovery of vial contents.

| Data         |                |
|--------------|----------------|
| kDa          | MK             |
| 170          | - Man -        |
| 95           | - ence         |
| 72           |                |
| tlabscien 55 | C and a conner |
| Elabo 43     | -              |
| 34           | -              |
| 26           |                |

> 95 % as determined by reducing SDS-PAGE.

## Background

Semaphorin-5A (SEMA5A) is a member of the Semaphorin family of axon guidance molecules. SEMA5A is a 140 kDa protein. Class 5 Semaphorins are type I transmembrane glycoproteins with an N- terminal Sema domain and multiple juxtamembrane type 1 Thrombospondin (TSP) repeats within their extracellular domains. SEMA5A is expressed in neuroepithelial cells surrounding retinal axons, oligodendrocytes, the base of limb buds, the mesoderm surrounding cranial vessels , and the cardiac atrial septum and endocardial cushions, Human SEMA5A cDNA encodes a signal sequence, a extracellular domain (ECD), a transmembrane sequence and an cytoplasmic portion. SEMA5A mutations have been implicated in the genetic syndrome, cri-du-chat, while some polymorphisms may increase risk for neurodegenerative diseases such as Parkinson. The expression of SEMA5A may be upregulated in metastatic cancer cells and downregulated in autism.

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