



Recombinant Protein Technical Manual

**Recombinant Human Semaphorin 5A/SEMA5A
Protein (aa 23-765, His Tag)**
RPES4354

Product Data:

Product SKU: RPES4354

Size: 10µg

Species: Human

Expression host: Human Cells

Uniprot: Q13591

Protein Information:

Molecular Mass: 84.7 kDa

AP Molecular Mass: 100 kDa

Tag: C-6His

Bio-activity:

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: 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°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, 0.1mM EDTA, 0.05% Tween 20, pH 7.2.

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Semaphorin-5A; Semaphorin-F; Sema F; SEMA5A; SEMAF

Immunogen Information:

Sequence: Glu23-Thr765

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, an extracellular domain (ECD), a transmembrane sequence and a 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.