Recombinant Protein Technical Manual

Recombinant Mouse Semaphorin-4D/SEMA4D Protein (Fc Tag)

RPES5093

Product Data:

Product SKU: RPES5093

Size: 10µg

Species: Mouse

Expression host: Human Cells

Uniprot: NP_038688.2

Protein Information:

Molecular Mass: 103.4 kDa

AP Molecular Mass: 130&170 kDa

Tag: C-Fc

Bio-activity:

Purity: > 95 % as determined by 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℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ 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,pH7.4.

Reconstitution: Please refer to it for detailed information.

Application:

Synonyms: SEMA4D;Semaphorin-4D;M-Sema G;Semaphorin-C-like 2;Semaphorin-J;Sema J;CD100;Semacl2;Semaj;coll-4;Semacl2;Semaj

Immunogen Information:

Sequence: Phe24-Met711

Background:

SEMA4D is a member of the semaphorin family,contains one Ig-like C2-type domain, one PSI domain and one Sema domain. SEMA4D is strongly expressed in lymphoid tissues, especially in the thymus, as well as in the nervous tissues. However, SEMA4D is expressed at lower levels in testes, brain, kidney, small intestine, prostate, heart, placenta, lung and pancreas, but not in colon and liver. SEMA4D is a cell surface receptor for PLXN1B and PLXNB2 that plays an important role in cell-cell signaling. SEMA4D is involved in a number of fundamental biological processes such as promoting reorganization of the actin cytoskeleton, the migration of cerebellar granule cells and of endothelial cells and signaling via SRC and PTK2B/PYK2, which then mediates activation of phosphatidylinositol 3-kinase and of the AKT1 signaling cascade. Not only these, it plays a role in axonal growth cone guidance in the developing central nervous system. Semaphorin-4D / SEMA4D may play a functional role in the immune system, as well as in the nervous system. It could induce B-cells to aggregate and improves their viability (in vitro). SEMA4D is involved in regulating dendrite and axon branching and morphogenesis and promoting interaction with PLXNB1 mediates activation of RHOA.