

Recombinant Human SECTM1 Protein

Catalog No.: RP00278

Sequence Information

Species	Gene ID
Human	6398
Swiss Prot	Tags
Q8WVN6	C-hFc&His

Synonyms
SECTM1,K12

Product Information

Source	Purification
HEK293 cells	≥ 95 % as determined by SDS-PAGE.

Calculated MW**Observed MW**
39.51 kDa 50–55 kDa

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1–0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

This protein, also known as K12, is a transmembrane and secreted protein with characteristics of a type 1a transmembrane protein of SECTM family. It is found in a perinuclear Golgi-like pattern and thought to be involved in hematopoietic and/or immune system processes. The human K12 protein has been shown to be primarily expressed in spleen, prostate, testis, small intestine, and in peripheral blood leukocytes. The K12 protein is expressed on the cell surface in such small amounts as to preclude detection. Alternatively, it may be that K12 on the cell surface is rapidly cleaved to generate a soluble K12 protein. Immunohistochemical analysis of peripheral blood cells shows that K12 is found in leukocytes of the myeloid lineage, with the strongest staining observed in granulocytes and no detectable expression in lymphocytes. May be involved in thymocyte signaling. It had been suggested a role for thymic microenvironment-produced K12 in regulation of thymocyte signaling and cytokine release, particularly in the setting of thymus pathology where IFN-γ is upregulated such as myasthenia gravis. In addition, as a putative natural CD7 ligand, SECTM1/K12 may be responsible for the costimulatory role it plays in T cell activation.

Basic Information

Description

Recombinant Human SECTM1 Protein is produced by HEK293 expression system. The target protein is expressed with sequence (Gln29–Gly145) of human SECTM1 (Accession #NP_002995.1) fused with an Fc, 6×His tag at the C-terminus.

Activity

Measured by its binding ability in a functional ELISA. Immobilized Human CD7 Protein at 1 μg/mL (100 μL/well) can bind SECTM1 with a linear range of 0.039–1.575 ng/mL. Measured by the ability of the immobilized protein to support the adhesion of Jurkat human acute T cell leukemia cells. When 8×10⁴ cells/well are added to SECTM1 coated plates (5 μg/mL and 100 μL/well) in the presence of 10 μg/mL PHA, approximately 40–50% cells will adhere specifically after 60 minutes at 37°C.

Shipping

Lyophilized proteins are shipped at ambient temperature. Liquid proteins are shipped at frozen temperature with dry ice. Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at –20°C

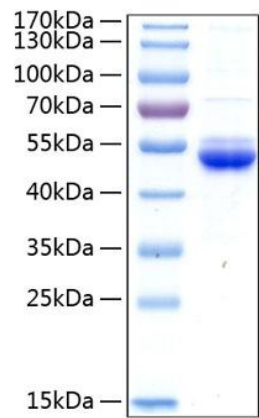
Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

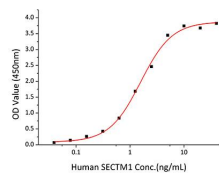
Contact

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Validation Data



Recombinant Human SECTM1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Immobilized Recombinant Human CD7 Protein at 1 $\mu\text{g/mL}$ (100 μL /well) can bind SECTM1 with a linear range of 0.039–1.575 ng/mL.