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Recombinant Human STIM1 Protein

Catalog No.: RP03108 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Human	6786	Q13586-1

Tags
C-His

Synonyms
GOK; TAM; TAM1; IMD10; STRMK; D11S4896E

Product Information

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

Calculated MW	Observed MW
22.71 kDa	35-40 kDa

Endotoxin
< 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 stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Contact

400-999-6126

cn.market@abclonal.com.cn

www.abclonal.com.cn

Background

Stromal interaction molecule 1, also known as STIM1 and GOK, is a cell membrane, a single-pass type I membrane protein and a endoplasmic reticulum membrane protein. STIM1 / GOK is ubiquitously expressed in various human primary cells and tumor cell lines. It contains one EF-hand domain and one SAM (sterile alpha motif) domain. STIM1 / GOK plays a role in mediating Ca2+ influx following depletion of intracellular Ca2+ stores. It acts as Ca2+ sensor in the endoplasmic reticulum via its EF-hand domain. Upon Ca2+ depletion, STIM1 / GOK translocates from the endoplasmic reticulum to the plasma membrane where it activates the Ca2+ release-activated Ca2+ (CRAC) channel subunit, TMEM142A / ORAI1. Transfection of STIM1 / GOK into cells derived from a rhabdoid tumor and from a rhabdomyosarcoma that do not express detectable levels of STIM1 can induce cell death, suggesting a possible role in the control of rhabdomyosarcomas and rhabdoid tumors. Defects in STIM1 are the cause of immune dysfunction with T-cell inactivation due to calcium entry defect type 2 (IDTICED2) which is an immune disorder characterized by recurrent infections, impaired T-cell activation and proliferative response, decreased T-cell production of cytokines, lymphadenopathy, and normal lymphocytes counts and serum immunoglobulin levels.

Basic Information

Description
Recombinant Human STIM1 Protein is produced by HEK293 expression system. The target protein is expressed with sequence (Leu23-Asp213) of Human STIM1 (Accession #NP_003147.2) fused with a 6×His tag at the C-terminus.

Bio-Activity

Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

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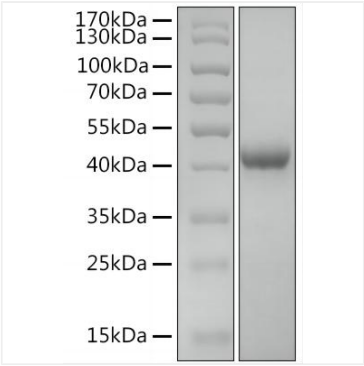
Validation Data



Recombinant Human STIM1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.

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