

# 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	> 97% 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 stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

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## Background

Stromal interaction molecule 1, also known as STIM1 and GOK, is a cell membrane, a single-pass type I membrane protein and an 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 Ca<sup>2+</sup> influx following depletion of intracellular Ca<sup>2+</sup> stores. It acts as Ca<sup>2+</sup> sensor in the endoplasmic reticulum via its EF-hand domain. Upon Ca<sup>2+</sup> depletion, STIM1 / GOK translocates from the endoplasmic reticulum to the plasma membrane where it activates the Ca<sup>2+</sup> release-activated Ca<sup>2+</sup> (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

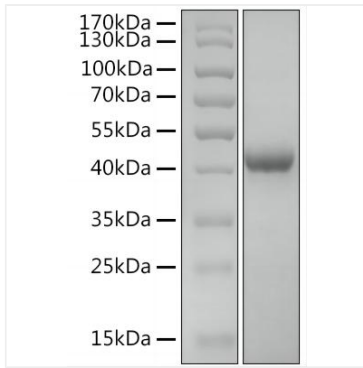
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Human STIM1 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 35-40 kDa.