

# Recombinant Stromal Interaction Molecule 1

**Cat. No.** STIM1-4619H    **Lot. No.** (See product label)

## SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>    | Recombinant STIM1 produced in E.Coli is a single, non-glycosylated polypeptide chain containing 343 amino acids and having a molecular mass of 38 kDa. STIM1 is fused to Calmodulin and purified by conventional chromatography techniques.                                                                                                                                                                                                                                                                                                                         |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Source</b>              | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Description</b>         | STIM1 is a type-1 transmembrane protein that is necessary for store-operated Ca(2+) entry, a process of extracellular Ca(2+) influx in response to the depletion of Ca(2+) stores in the endoplasmic reticulum (ER). STIM1 localizes predominantly to the ER; upon Ca(2+) release from the ER, STIM1 translocates to the ER-plasma membrane junctions and activates Ca(2+) channels. STIM1 is an adhesion molecule involved in early hematopoiesis by mediating attachment to stromal cells. STIM1 controls the survival and/or proliferation of b-cell precursors. |
| <b>Form</b>                | The STIM1 protein solution (1mg/ml) contains 20mM Tris pH-7.5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Purity</b>              | Greater than 90.0% as determined by (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Physical Appearance</b> | Sterile filtered colorless solution.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Amino acid sequence</b> | MADQLTEEQI AEFKEAFSLF DKDGDGTITT KELGTVMRSL GQNPTEAELQ<br>DMINEVDADG NGTIDFPEFL TMMARKMKDT DSEEEIREAF RVFDKDGNGY                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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ISAAELRHVM TNLGEKLTDE EVDEMIREAD IDGDGQVNYE EFVQMMTAKG  
 SMLSHSHSEK ATGTSSGANS EESTAAEFCE IDKPLCHSED EKLSFEAVRN  
 IHKLMDDDAN GDVDVEESDE FLREDLNYHD PTVKHSTFHG EDKLISVEDL  
 WKAWKSSEVY NWTVDEVVQW LITYVELPQY EETFRKLQLS GHAMPRLAVT  
 NTTMTGTVLK MDRSHRQKL QLKALDTVLF GPPLLTRHNN LKD.

**Storage**

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

**Pathways**

SNARE interactions in vesicular transport; Membrane Trafficking

## GENE INFORMATION

**Gene Name**

STIM1 stromal interaction molecule 1 [ Homo sapiens ]

**Official Symbol**

STIM1

**Synonyms**

STIM1; stromal interaction molecule 1; STIM1 stromal interaction molecule 1; GOK; D11S4896E

**Gene ID**

6786

**mRNA Refseq**

NM\_003156

**Protein Refseq**

NP\_003147

**MIM**

605921

**UniProt ID**

Q13586

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|--------------------------------|--------------------------------------|
| <b>Chromosome<br/>Location</b> | 11p15.5                              |
| <b>Function</b>                | calcium ion binding; protein binding |