



Product Datasheet

Product Name	Stromal Interaction Molecule 1 Human Recombinant
Cata No	CB501477
Source	<i>Escherichia Coli</i> .
Synonyms	Stromal interaction molecule 1, GOK, D11S4896E, STIM-1, STIM1.

Description

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. STIM1 gene is one of several genes located in the imprinted gene domain of 11p15.5, a significant tumor-suppressor gene region. Alterations in this region have been associated with the Beckwith-Wiedemann syndrome, Wilms tumor, rhabdomyosarcoma, adrenocortical carcinoma, and lung, ovarian, and breast cancer. STIM1 is involved in malignancies as well as early hematopoiesis, by mediating attachment to stromal cells. STIM1 is oriented in a head-to-tail configuration with the ribonucleotide reductase 1 gene (RRM1), with the 3' end of this gene situated 1.6 kb from the 5' end of the RRM1 gene.

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.

Physical Appearance

Sterile filtered colorless solution.

Purity

Greater than 90.0% as determined by:
(a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.

Formulation

The STIM1 protein solution (1mg/ml) contains 20mM Tris pH-7.5.

Stability

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.

Sequence

MADQLTEEQI AEFKEAFSLF DKDGDGTITT
KELGTVMRSL GQNPTEAELQ DMINEVDADG
NGTIDFPEFL TMMARKMKDT DSEEEIREAF
RVFDKDGNGY ISAAELRHVM TNLGEKLTDE
EVDEMIREAD IDGDGQVNYE EFVQMMTAKG
SMLSHSHSEK ATGTSSGANS EESTAAEFCR
IDKPLCHSED EKLSFEAVRN IHKLMDDAN
GDVDVEESDE FLREDLNYHD PTVKHSTFHG
EDKLISVEDL WKAWKSSEVY NWTVDEVVQW
LITYVELPQY EETFRKLQLS GHAMPRLAVT
NTTMTGTVLK MDRSHRQKL QLKALDTVLF
GPPLLTRHNN LKD.

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