

Recombinant Human STIM1 / GOK Protein (His tag)

Cat.NO.: TP06540

3th Edition

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

Description: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 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.

Form:PBS

Molecular Weight:23.3 kDa

Sequences:Met 1-Asp 213

Purity:> 95% by HPLC

Concentration:

Endotoxin Level:<1.0 EU per 1 ug of protein (determined by LAL method)

Storage:Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.