STIM1 Protein, Human (HEK293, His)

Cat. No.:	HY-P74536
Synonyms:	Stromal interaction molecule 1; STIM1; GOK
Species:	Human
Source:	HEK293
Accession:	Q13586/NP_003147.2(L23-D213)
Gene ID:	6786
Molecular Weight:	27-34 kDa. The protein migrates as 27-34 kDa under reducing SDS-PAGE due to glycosylation.

PROPERTIES

AA Sequence	L S H S H S E K A T G T S S G A N S E E S T A A E F C R I D K P L C H S E D E K L S F E A V R N I H K L M D D D A N G D V D V E E S D E F L R E D L N Y H D P T V K H S T F H G E D K L I S V E D L W K A W K S S E V Y N W T V D E V V Q W L I T Y V E L P Q Y E E T F R K L Q L S G H A M P R L A V T N T T M T G T V L K M T D R S H R Q K L Q L K A L D T V L F G P P L L T R H N H L K D
Biological Activity	Data is not available.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	STIM1 (Stromal interaction molecule 1) plays a pivotal role in mediating store-operated Ca(2+) entry (SOCE), a process that involves Ca(2+) influx following the depletion of intracellular Ca(2+) stores. Functioning as a Ca(2+) sensor in the endoplasmic reticulum through its EF-hand domain, STIM1 translocates from the endoplasmic reticulum to the plasma membrane upon Ca(2+) depletion. In this activated state, it interacts with and activates the Ca(2+) release-activated Ca(2+) (CRAC) channel subunit ORAI1. STIM1 forms homooligomers and heterooligomers with STIM2, and its interaction with other proteins, such as SPPL3, MAPRE1, CRACR2A/EFCAB4B, SARAF, EFHB, ASPH, SLC35G1, TMEM203, CASQ1, and ADCY8, further

regulates its cellular functions, including SOCE activity. Additionally, STIM1 has been implicated in enamel formation and undergoes conformational changes facilitated by interactions with STIMATE. These dynamic interactions highlight the multifaceted role of STIM1 in cellular Ca(2+) signaling and homeostasis.

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