OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for TA328627

Stromal interaction molecule 1 (STIM1) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, IF, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3,000; FC: 1:50-1:600
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide CHSEDEKLSFEAVR, corresponding to amino acid residues 56-69 of human STIM1.STIM1 expressed on the plasma membrane: Extracellular, N-terminus. STIM1 expressed on the ER: Luminal, N-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	stromal interaction molecule 1
Database Link:	NP_003147 Entrez Gene 20866 MouseEntrez Gene 361618 RatEntrez Gene 6786 Human Q13586

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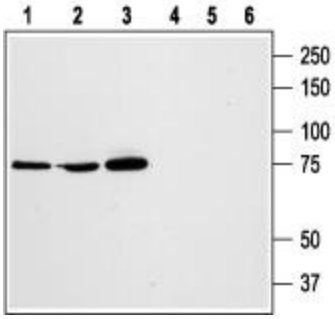
Background: Cytosolic Ca2+ has long been known to act as a key second messenger in many intracellular pathways including synaptic transmission, muscle contraction, hormonal secretion, and cell growth and proliferation. The mechanism controlling the influx of intracellular Ca2+ either by calcium-release-activated Ca2+ channels (CRAC) or from intracellular stores has lately become of great interest. Recently, several key players of the store-operated complex have been identified.The Orai family consists of three members, Orai1-3, and the STIM family, which consists of two members, STIM1 and STIM2. Orai1 (also known as CRACM1) acts as the store-operated calcium channel (SOC) and STIM1 as the endoplasmic reticulum (ER) Ca2+ sensor. The majority of STIM1 appears to be localized intracellularly at the ER membrane while low expression of STIM1 has been detected on the cell surface of several cell types. STIM1 has an amino-terminal EF hand Ca2+ -binding domain facing the lumen of the ER. Upon Ca2+ store depletion, STIM1 molecules are redistributed in punctae underneath the plasma membrane and activate SOCs. Several possible interactions between STIM1 and Orai1 have been suggested. The most simple and cited is a dynamic interaction between the cytosolic C-terminus of STIM1 and the cytoplasmic domain of the Orai1 channel. STIM1 is assumed to regulate the activity of all known SOCs, including native SOCs.Consistent with their important role as calcium sensors within the ER, STIM1 proteins are ubiquitously expressed.

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

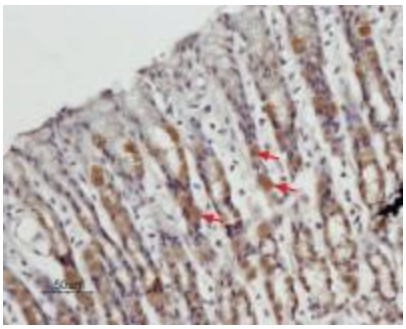
Note: This antibody was tested in live cell imaging. Please see IF/ICC data for detail.

Protein Families: Transmembrane

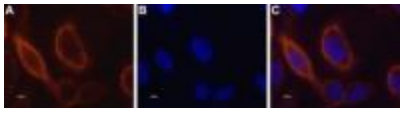
Product images:



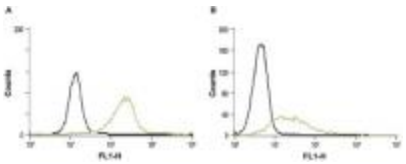
Western blot analysis of RBL (lanes 1 and 4), HL-60 (lanes 2 and 5), and Jurkat (lanes 3 and 6) cell lysates: 1, 2, 3. Anti-STIM1 (extracellular) antibody, (1:1000). 4, 5, 6. Anti-STIM1 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of STIM1 in rat stomach. Immunohistochemical staining of paraffin embedded rat stomach sections using Anti-STIM1 (extracellular) antibody, (1:100). STIM1 is expressed in the parietal cells of the gastric mucosa (arrows). Hematoxilin is used as the counterstain.



Expression of STIM1 in RBL cells. Immunocytochemical staining of STIM1 in live rat basophilic leukemia (RBL) cells. A. Extracellular staining of cells with Anti-STIM1 (extracellular) antibody, (1:50) followed by goat anti-rabbit-AlexaFluor-555 secondary antibody. B. Nuclear staining of cells using the cell-permeable dye Hoechst 33342. C. Merged image of panels A and B.



Indirect flow cytometry analysis of intact RBL (A) and Jurkat (B) cells. black line, Cells + FITC-conjugated goat anti-rabbit antibody. green line, Cells + Anti-STIM1 (extracellular) antibody, (5-10 ug antibody/0.5-1x106 cells) + FITC-conjugated goat anti-rabbit antibody.