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STIM2 Antibody

Catalog # ASC10531

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9P246
Other Accession	NP_065911, 41349446
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	83971
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	STIM2 antibody can be used for detection of STIM2 by Western blot at 0.5 - 1 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	57620
Other Names	STIM2 Antibody: KIAA1482, Stromal interaction molecule 2, stromal interaction molecule 2
Target/Specificity	STIM2;
Reconstitution & Storage	STIM2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	STIM2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	STIM2
Synonyms	KIAA1482
Function	Plays a role in mediating store-operated Ca(2+) entry (SOCE), a Ca(2+) influx following depletion of intracellular Ca(2+) stores. Functions as a highly sensitive Ca(2+) sensor in the endoplasmic reticulum which activates both store-operated and store-independent Ca(2+)-influx. Regulates basal cytosolic and endoplasmic reticulum Ca(2+) concentrations. Upon mild variations of the endoplasmic reticulum Ca(2+) concentration, translocates from the endoplasmic reticulum to the plasma membrane where it probably activates

	the Ca(2+) release-activated Ca(2+) (CRAC) channels ORAI1, ORAI2 and ORAI3. May inhibit STIM1-mediated Ca(2+) influx.
Cellular Location	Endoplasmic reticulum membrane; Single-pass type I membrane protein. Note=Dynamically translocates from a uniform endoplasmic reticulum distribution to punctual endoplasmic reticulum-plasma membrane junctions in response to decrease in endoplasmic reticulum Ca(2+) concentration
Tissue Location	Expressed in all tissues and tumor cell lines examined.

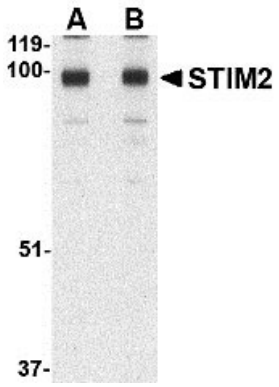
Background

STIM2 Antibody: In T lymphocytes, the sole pathway for Ca++ entry following antigen-receptor binding is through store-operated Ca++-release-activated Ca++ (CRAC) channels. These channels are made up of the pore-forming subunit ORAI1 and the stromal interaction molecule 1 (STIM1), a protein that functions as a Ca++ sensor and activates the CRAC channels, migrating to the plasma membrane from endoplasmic reticulum (ER)-like sites which act as the Ca++ store. A related molecule, STIM2, acts to inhibit the STIM1-mediated store-operated Ca++ entry, and can form complexes with STIM1, suggesting they may play a coordinated role in controlling Ca++ entry. At least three isoforms of STIM2 are known to exist. This STIM2 antibody is predicted to have no cross-reactivity to STIM1.

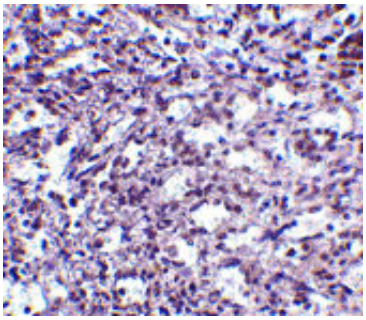
References

Luik RM and Lewis RS. New insights into the molecular mechanisms of store-operated Ca^{2+} signaling in T cells. Trends Mol. Med.2007; 13:103-7.
Feske S, Gwack Y, Prakriya M, et al. A mutation in Orai1 causes immune deficiency by abrogating CRAC channel function. Nature2006; 441:179-85.
Zhang SL, Yu Y, Roos J, et al. STIM1 is a Ca^{2+} sensor that activates CRAC channels and migrates from the Ca^{2+} store to the plasma membrane. Nature2005; 437:902-5.
Spassova MA, Soboloff J, He L-P, et al. STIM1 has a plasma membrane role in the activation of store-operated $^{Ca2+}$ channels. Proc. Natl. Acad. Sci. USA2006; 103:4040-5.

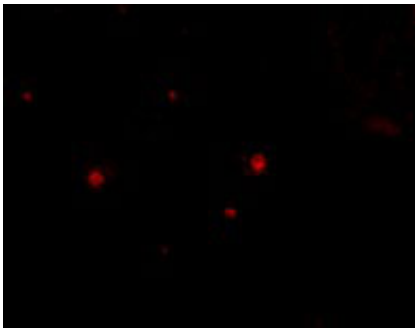
Images



Western blot analysis of STIM2 in A-20 cell lysate with STIM2 antibody at (A) 0.5 and (B) 1 µg/mL.



Immunohistochemistry of STIM2 in human spleen tissue with STIM2 antibody at 2.5 µg/mL.



Immunofluorescence of STIM2 in Human Spleen cells with STIM2 antibody at 20 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.