

**STIM2 Antibody**  
**Catalog # ASC10532****Specification**

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**STIM2 Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">Q9P246</a>
Other Accession	<a href="#">NP_065911</a> , <a href="#">41349446</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	STIM2 antibody can be used for detection of STIM2 by Western blot at 0.5 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.

**STIM2 Antibody - Additional Information**

Gene ID	57620
<b>Other Names</b>	
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.

**STIM2 Antibody - 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  $\text{Ca}^{2+}$  release-activated  $\text{Ca}^{2+}$  (CRAC) channels ORAI1, ORAI2 and ORAI3. May inhibit STIM1-mediated  $\text{Ca}^{2+}$  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  $\text{Ca}^{2+}$  concentration

#### Tissue Location

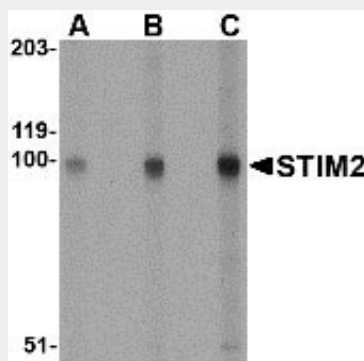
Expressed in all tissues and tumor cell lines examined.

### STIM2 Antibody - Protocols

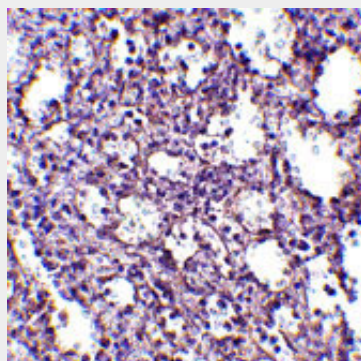
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### STIM2 Antibody - Images



Western blot analysis of STIM2 in A-20 cell lysate with STIM2 antibody at (A) 0.5, (B) 1 and (C) 2  $\mu\text{g/mL}$ .



Immunohistochemistry of STIM2 in human spleen tissue with STIM2 antibody at 2.5  $\mu\text{g/mL}$ .



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

### **STIM2 Antibody - Background**

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

### **STIM2 Antibody - References**

Luik RM and Lewis RS. New insights into the molecular mechanisms of store-operated  $\text{Ca}^{2+}$  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. *Nature* 2006; 441:179-85.

Zhang SL, Yu Y, Roos J, et al. STIM1 is a  $\text{Ca}^{2+}$  sensor that activates CRAC channels and migrates from the  $\text{Ca}^{2+}$  store to the plasma membrane. *Nature* 2005; 437:902-5.

Spassova MA, Soboloff J, He L-P, et al. STIM1 has a plasma membrane role in the activation of store-operated  $\text{Ca}^{2+}$  channels. *Proc. Natl. Acad. Sci. USA* 2006; 103:4040-5.