

**STIM1 Antibody**  
**Catalog # ASC10530****Specification**

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**STIM1 Antibody - Product Information**

Application	IHC, WB
Primary Accession	<a href="#">Q13586</a>
Other Accession	<a href="#">NP_003147</a> , <a href="#">6786</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 59, 75, 87 kDa

Application Notes	Observed: 88 kDa KDa STIM1 antibody can be used for detection of STIM1 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL.
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**STIM1 Antibody - Additional Information**

Gene ID **6786**

**Other Names**

STIM1 Antibody: GOK, TAM, IMD10, D11S4896E, GOK, Stromal interaction molecule 1, stromal interaction molecule 1

**Target/Specificity**

STIM1 antibody was raised against a 24 amino acid synthetic peptide from near the carboxy terminus of human STIM1.<br><br>The immunogen is located within the last 50 amino acids of STIM1.

**Reconstitution & Storage**

STIM1 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**

STIM1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**STIM1 Antibody - Protein Information**

**Name** STIM1

**Synonyms** GOK {ECO:0000303|PubMed:9377559}

**Function**

Plays a role in mediating store-operated  $\text{Ca}^{2+}$  entry (SOCE), a  $\text{Ca}^{2+}$  influx following depletion of intracellular  $\text{Ca}^{2+}$  stores (PubMed:<a href="http://www.uniprot.org/citations/15866891" target="\_blank">15866891</a>, PubMed:<a href="http://www.uniprot.org/citations/16005298" target="\_blank">16005298</a>, PubMed:<a href="http://www.uniprot.org/citations/16208375" target="\_blank">16208375</a>, PubMed:<a href="http://www.uniprot.org/citations/16537481" target="\_blank">16537481</a>, PubMed:<a href="http://www.uniprot.org/citations/16733527" target="\_blank">16733527</a>, PubMed:<a href="http://www.uniprot.org/citations/16766533" target="\_blank">16766533</a>, PubMed:<a href="http://www.uniprot.org/citations/16807233" target="\_blank">16807233</a>, PubMed:<a href="http://www.uniprot.org/citations/18854159" target="\_blank">18854159</a>, PubMed:<a href="http://www.uniprot.org/citations/19249086" target="\_blank">19249086</a>, PubMed:<a href="http://www.uniprot.org/citations/22464749" target="\_blank">22464749</a>, PubMed:<a href="http://www.uniprot.org/citations/24069340" target="\_blank">24069340</a>, PubMed:<a href="http://www.uniprot.org/citations/24351972" target="\_blank">24351972</a>, PubMed:<a href="http://www.uniprot.org/citations/24591628" target="\_blank">24591628</a>, PubMed:<a href="http://www.uniprot.org/citations/26322679" target="\_blank">26322679</a>, PubMed:<a href="http://www.uniprot.org/citations/25326555" target="\_blank">25326555</a>, PubMed:<a href="http://www.uniprot.org/citations/28219928" target="\_blank">28219928</a>). Acts as a  $\text{Ca}^{2+}$  sensor in the endoplasmic reticulum via its EF-hand domain. Upon  $\text{Ca}^{2+}$  depletion, translocates from the endoplasmic reticulum to the plasma membrane where it activates the  $\text{Ca}^{2+}$  release- activated  $\text{Ca}^{2+}$  (CRAC) channel subunit ORAI1 (PubMed:<a href="http://www.uniprot.org/citations/16208375" target="\_blank">16208375</a>, PubMed:<a href="http://www.uniprot.org/citations/16537481" target="\_blank">16537481</a>). Involved in enamel formation (PubMed:<a href="http://www.uniprot.org/citations/24621671" target="\_blank">24621671</a>). Activated following interaction with STIMATE, leading to promote STIM1 conformational switch (PubMed:<a href="http://www.uniprot.org/citations/26322679" target="\_blank">26322679</a>).

### Cellular Location

Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single-pass type I membrane protein. Cytoplasm, cytoskeleton. Sarcoplasmic reticulum.

Note=Translocates from the endoplasmic reticulum to the cell membrane in response to a depletion of intracellular calcium and is detected at punctae corresponding to junctions between the endoplasmic reticulum and the cell membrane (PubMed:19249086, PubMed:16005298, PubMed:16208375, PubMed:18854159) Associated with the microtubule network at the growing distal tip of microtubules (PubMed:19632184). Colocalizes with ORAI1 at the cell membrane (PubMed:27185316). Colocalizes preferentially with CASQ1 at endoplasmic reticulum in response to a depletion of intracellular calcium (PubMed:27185316).

### Tissue Location

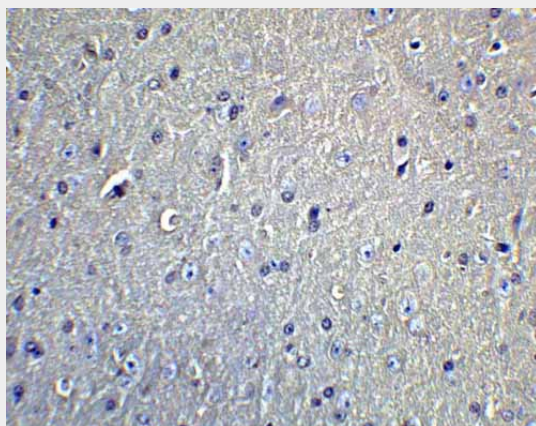
Ubiquitously expressed in various human primary cells and tumor cell lines.

### STIM1 Antibody - Protocols

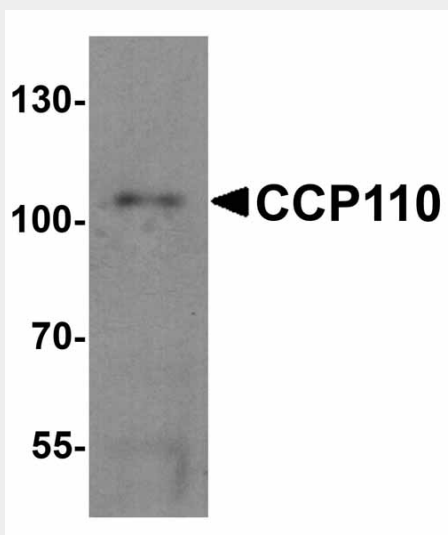
Provided below are standard protocols that you may find useful for product applications.

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

### STIM1 Antibody - Images



Immunohistochemistry of DCLK1 in mouse brain tissue with DCLK1 Antibody at 5 µg/mL.



Western blot analysis of CCP110 in human colon tissue lysate with CCP110 antibody at 1 µg/mL.

### STIM1 Antibody - Background

**STIM1 Antibody:** In T lymphocytes, the sole pathway for  $\text{Ca}^{2+}$  entry following antigen-receptor binding is through store-operated  $\text{Ca}^{2+}$ -release-activated  $\text{Ca}^{2+}$  (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  $\text{Ca}^{2+}$  sensor and activates the CRAC channels, migrating to the plasma membrane from endoplasmic reticulum (ER)-like sites which act as the  $\text{Ca}^{2+}$  store. A related molecule, STIM2, acts to inhibit the STIM1-mediated store-operated  $\text{Ca}^{2+}$  entry, and can form complexes with STIM1, suggesting they may play a coordinated role in controlling  $\text{Ca}^{2+}$  entry.

### STIM1 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.
- Spasova 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.