

# STIM1 antibody (pAb)

Rabbit Anti-Human/Mouse/Rat STIM1

## Instruction Manual

Catalog Number	PK-AB718-4119
Synonyms	STIM1 Antibody: Stromal interaction molecule 1
Description	In T lymphocytes, the sole pathway for Ca <sup>2+</sup> entry following antigen-receptor binding is through store-operated Ca <sup>2+</sup> -release-activated Ca <sup>2+</sup> (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 <sup>2+</sup> sensor and activates the CRAC channels, migrating to the plasma membrane from endoplasmic reticulum (ER)-like sites which act as the Ca <sup>2+</sup> store. A related molecule, STIM2, acts to inhibit the STIM1-mediated store-operated Ca <sup>2+</sup> entry, and can form complexes with STIM1, suggesting they may play a coordinated role in controlling Ca <sup>2+</sup> entry. At least two isoforms of STIM1 are known to exist; this antibody will detect only the larger form. This STIM1 antibody is predicted to have no cross-reactivity to STIM2.
Quantity	100 µg
Source / Host	Rabbit
Immunogen	STIM1 antibody was raised in rabbits against a 24 amino acid peptide from near the carboxy terminus of human STIM1.
Purification Method	Affinity chromatography purified via peptide column.
Clone / IgG Subtype	Polyclonal antibody
Species Reactivity	Human, Mouse, Rat
Specificity	
Formulation	Antibody is supplied in PBS containing 0.02% sodium azide.
Reconstitution	During shipment, small volumes of antibody will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 µl or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.
Storage & Stability	Antibody can be stored at 4°C for three months and at -20°C 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.
Applications	E, WB, IHC <b>Note:</b> Antibody might be suitable for other applications not tested so far. Optimal concentrations for each application have to be determined individually. 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.
Images	Available upon request.
References	Luik RM and Lewis RS. New insights into the molecular mechanisms of store-operated Ca <sup>2+</sup> 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 Ca <sup>2+</sup> sensor that activates CRAC channels and migrates from the Ca <sup>2+</sup> 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 Ca <sup>2+</sup> channels. Proc. Natl. Acad. Sci. USA 2006; 103:4040-5.
Images	Available upon request.
Related Products	Cat.No. PK-AB718-4119P; STIM1 Peptide Cat.No. PK-AB718-1409; Mouse Thymus Tissue Lysate

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