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Diagnostik & molekulare Diagnostik



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- Expressversand

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# Stim1 (h): 293T Lysate: sc-171680

## BACKGROUND

Ca<sup>2+</sup> influx is essential for a variety of cellular functions including, secretion and transcription. Stromal interaction molecule 1 (Stim1) is an ubiquitously expressed cell surface transmembrane glycoprotein that plays a role in mediating Ca<sup>2+</sup> influx following the depletion of intracellular Ca<sup>2+</sup> stores. Stim1 functions in the endoplasmic reticulum (ER) where it acts as a Ca<sup>2+</sup> sensor via its EF-hand domain which causes large conformational changes. When Ca<sup>2+</sup> levels drop, Stim1 translocates from the ER to the plasma membrane, where it activates the Ca<sup>2+</sup> release-activated Ca<sup>2+</sup> (CRAC) channel subunit, TMEM142A/Orai1. Stim2 is a potent inhibitor of Stim1-mediated store-operated calcium (SOC) entry. Stim1 is implicated in tumor growth suppression and stromal-haematopoietic cell interactions.

## REFERENCES

- Manji, S.S., Parker, N.J., Williams, R.T., van Stekelenburg, L., Pearson, R.B., Dziadek, M. and Smith, P.J. 2000. Stim1: a novel phosphoprotein located at the cell surface. *Biochim. Biophys. Acta* 1481: 147-155.
- Williams, R.T., Senior, P.V., Van Stekelenburg, L., Layton, J.E., Smith, P.J. and Dziadek, M.A. 2002. Stromal interaction molecule 1 (Stim1), a transmembrane protein with growth suppressor activity, contains an extracellular Sam domain modified by N-linked glycosylation. *Biochim. Biophys. Acta* 1596: 131-137.
- Zhang, S.L., Yu, Y., Roos, J., Kozak, J.A., Deerinck, T.J., Ellisman, M.H., Stauderman, K.A. and Cahalan, M.D. 2005. 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* 437: 902-905.
- Mignen, O., Thompson, J.L. and Shuttleworth, T.J. 2007. Stim1 regulates Ca<sup>2+</sup> entry via arachidonate-regulated Ca<sup>2+</sup>-selective (ARC) channels without store depletion or translocation to the plasma membrane. *J. Physiol.* 579: 703-715.
- Hauser, C.T. and Tsien, R.Y. 2007. A hexahistidine-Zn<sup>2+</sup>-dye label reveals Stim1 surface exposure. *Proc. Natl. Acad. Sci. USA* 104: 3693-3697.
- Liao, Y., Erxleben, C., Yildirim, E., Abramowitz, J., Armstrong, D.L. and Birnbaumer, L. 2007. Orai proteins interact with TRPC channels and confer responsiveness to store depletion. *Proc. Natl. Acad. Sci. USA* 104: 4682-4687.
- Ambudkar, I.S., Ong, H.L., Liu, X., Bandyopadhyay, B. and Cheng, K.T. 2007. TRPC1: The link between functionally distinct store-operated calcium channels. *Cell Calcium* 42: 213-223.
- Takahashi, Y., Murakami, M., Watanabe, H., Hasegawa, H., Ohba, T., Munehisa, Y., Nobori, K., Ono, K., Iijima, T. and Ito, H. 2007. Essential role of the N-terminus of murine Orai1 in store-operated Ca<sup>2+</sup> entry. *Biochem. Biophys. Res. Commun.* 356: 45-52.

## CHROMOSOMAL LOCATION

Genetic locus: STIM1 (human) mapping to 11p15.4.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PRODUCT

Stim1 (h): 293T Lysate represents a lysate of human Stim1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

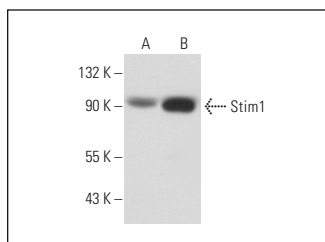
## APPLICATIONS

Stim1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Stim1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Stim1 (CDN3H4): sc-66173 is recommended as a positive control antibody for Western Blot analysis of enhanced human Stim1 expression in Stim1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## DATA



Stim1 (CDN3H4): sc-66173. Western blot analysis of Stim1 expression in non-transfected: sc-117752 (A) and human Stim1 transfected: sc-171680 (B) 293T whole cell lysates.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.