

Stim2 (H-300): sc-292638

BACKGROUND

Ca²⁺ influx is essential for a variety of cellular functions, such as secretion and transcription. Stim1 (stromal interaction molecule 1) is a ubiquitously expressed cell surface transmembrane glycoprotein that plays a role in mediating Ca²⁺ influx following the depletion of intracellular Ca²⁺ stores. Stim1 functions in the endoplasmic reticulum (ER) where it acts as a Ca²⁺ sensor via its EF-hand domain and is capable of causing large conformational changes in response to varying Ca²⁺ levels. When Ca²⁺ levels drop, Stim1 translocates from the ER to the plasma membrane, where it activates the Ca²⁺ release-activated Ca²⁺ (CRAC) channel subunit, Orai1. Stim2 (stromal interaction molecule 2) is a 746 amino acid protein that contains one EF-hand domain and one SAM domain and localizes to the ER as a single-pass type I membrane protein. Stim2 exists as an oligomer with Stim1 and plays an essential role in the inhibition of Stim1-mediated Ca²⁺ influx.

REFERENCES

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- Bojarski, L., et al. 2009. Presenilin-dependent expression of STIM proteins and dysregulation of capacitative Ca²⁺ entry in familial Alzheimer's disease. *Biochim. Biophys. Acta* 1793: 1050-1079.

CHROMOSOMAL LOCATION

Genetic locus: STIM2 (human) mapping to 4p15.2; Stim2 (mouse) mapping to 5 C1.

SOURCE

Stim2 (H-300) is a rabbit polyclonal antibody raised against amino acids 447-746 mapping at the C-terminus of Stim2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Stim2 (H-300) is recommended for detection of Stromal interaction molecule 2 precursor of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Stim2 (H-300) is also recommended for detection of Stromal interaction molecule 2 precursor in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Stim2 siRNA (h): sc-76591, Stim2 siRNA (m): sc-76592, Stim2 shRNA Plasmid (h): sc-76591-SH, Stim2 shRNA Plasmid (m): sc-76592-SH, Stim2 shRNA (h) Lentiviral Particles: sc-76591-V and Stim2 shRNA (m) Lentiviral Particles: sc-76592-V.

Molecular Weight of Stim2: 105 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.