SANTA CRUZ BIOTECHNOLOGY, INC.

Orai2 (N-17): sc-74780

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The Power to Question

BACKGROUND

Orai2 (orai calcium release-activated calcium modulator 2), also known as CBCIP2 (CAP-binding protein complex-interacting protein 2) or TMEM142B (transmembrane protein 142B), is a 254 amino acid multi-pass membrane protein that belongs to the orai family of proteins. Localizing to the plasma membrane, Orai2 plays an important role in store-operated calcium (SOC) entry, a process involving Ca^{2+} influx and replenishment of Ca^{2+} stores formerly emptied through the action of inositol 1,4,5-trisphosphate production and other Ca^{2+} mobilizing agents. CRAC channels are responsible for mediating calcium influx in T cells and play an important role in the immune response. Orai2 specifically increases the Ca^{2+}-selective current through coaction with the Ca^{2+} sensor Stim1.

REFERENCES

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3. DeHaven, W.I., Smyth, J.T., Boyles, R.R. and Putney, J.W. 2007. Calcium inhibition and calcium potentiation of Orai1, Orai2 and Orai3 calcium release-activated calcium channels. J. Biol. Chem. 282: 17548-17556.
4. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610929. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Peinelt, C., Lis, A., Beck, A., Fleig, A. and Penner, R. 2008. 2-aminoethoxydiphenyl borate directly facilitates and indirectly inhibits Stim1-dependent gating of CRAC channels. J. Physiol. 586: 3061-3073.

CHROMOSOMAL LOCATION

Genetic locus: ORAI2 (human) mapping to 7q22.1; Orai2 (mouse) mapping to 5 G2.

SOURCE

Orai2 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Orai2 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.

Blocking peptide available for competition studies, sc-74780 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Orai2 (N-17) is recommended for detection of Orai2 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Orai2 (N-17) is also recommended for detection of Orai2 in additional species, including bovine.

Suitable for use as control antibody for Orai2 siRNA (h): sc-76003, Orai2 siRNA (m): sc-76004, Orai2 shRNA Plasmid (h): sc-76003-SH, Orai2 shRNA Plasmid (m): sc-76004-SH, Orai2 shRNA (h) Lentiviral Particles: sc-76003-V and Orai2 shRNA (m) Lentiviral Particles: sc-76004-V.

Molecular Weight of Orai2: 28 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.