BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-Orai1 Antibody Picoband®

Catalog Number: A00909

About ORAI1

ORAI1 (ORAI calcium release-activated calcium modulator 1), also known as CRACM1, TMEM142A, Calcium release-activated calcium channel protein 1, Protein orai-1, Transmembrane protein 142A, FLJ14466, is a calcium selectiveion channelthat in humans is encoded by the ORAI1 gene. Orai1 channels play an important role in the activation of T-lymphocytes. The loss of function mutation of Orai1 causes severe combined immunodeficiency (SCID) in humans. The mammalian orai family has two additional homologs, orai2 and orai3. Orai proteins share no homology with any other ion channel family of any other known proteins. They have 4 transmembrane domains and form tetramers.Prakriya et al. showed that ORAI1 is a PM protein, and that CRAC channel function is sensitive to mutation of 2 conserved acidic residues in the transmembrane segments. Glu106-to-asp (E106D) and glu190-to-gln (E190Q) substitutions in transmembrane helices 1 and 3, respectively, diminished calcium ion influx, increased current carried by monovalent cations, and rendered the channel permeable to cesium ion.Prakriya et al. showed that ORAI1 is a PM protein, and that CRAC channel function is sensitive to mutation of 2 conserved acidic residues in the transmembrane segments.

Submit a product review to Biocompare.com





Submit a review of this product to Biocompare.com to receive a $20 Amazon.com giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.

Overview

Product Name	Anti-Orai1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Orai1 Antibody catalog # A00909. Tested in ELISA, Flow Cytometry, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q96D31

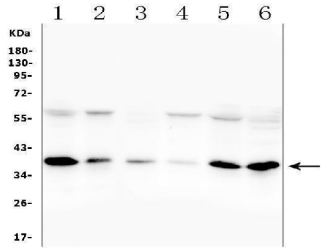
Technical Details

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

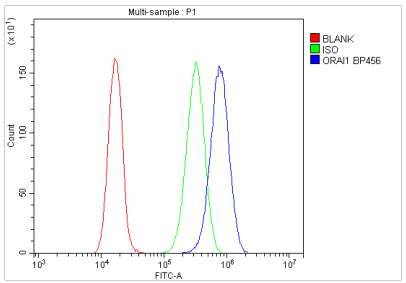
Immunogen	E.coli-derived human Orai1 recombinant protein (Position: A49-A301).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5ug/ml Flow Cytometry (Fixed), 1-3ug/1x10^6 cells ELISA, 0.1-0.5ug/ml Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

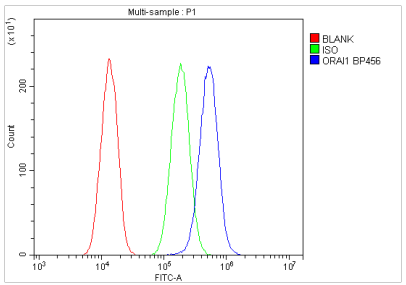
Anti-Orai1 Antibody Picoband® (A00909) Images



Western blot analysis of ORAI1 using anti-ORAI1 antibody (A00909). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human A375 whole cell lysates, Lane 2: human Jurka whole cell lysates, Lane 3: human A549 whole cell lysates, Lane 4: human A431 whole cell lysates, Lane 5: human HepG2 whole cell lysates, Lane 6: human K562 whole cell lysates, After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ORAI1 antigen affinity purified polyclonal antibody (Catalog # A00909) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for ORAI1 at approximately 39KD. The expected band size for ORAI1 is at 33KD.



Flow Cytometry analysis of CACO-2 cells using anti-ORAI1 antibody (A00909). Overlay histogram showing CACO-2 cells stained with A00909 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ORAI1 Antibody (A00909,1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Flow Cytometry analysis of A549 cells using anti-ORAI1 antibody (A00909). Overlay histogram showing A549 cells stained with A00909 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ORAI1 Antibody (A00909,1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-Orai1 Antibody

For Research Use Only. Not for use in diagnostic procedures.