10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Orai1 Antibody
Catalog # ABO11166

Specification

Anti-Orai1 Antibody - Product Information

Application	**WB**
Primary Accession	Q96D31
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Calcium release-activated calcium channel protein 1(ORAI1) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Orai1 Antibody - Additional Information

Gene ID 84876

Other Names
Calcium release-activated calcium channel protein 1, Protein orai-1, Transmembrane protein 142A, ORAI1, CRACM1, TMEM142A

Calculated MW
32668 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Cell membrane ; Multi-pass membrane protein . Cytoplasmic vesicle, autophagosome . Isoform beta is more mobile in the plasma membrane. Colocalizes with UBQLN1 in the autophagosome. .

Protein Name
Calcium release-activated calcium channel protein 1

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human Orai1(278-301aa EFARLQDQLDHRGDHPLTPGSHYA), different from the related rat and mouse sequences by two amino acids.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Belongs to the Orai family.

Anti-Orai1 Antibody - Protein Information

Name ORAI1

Synonyms CRACM1, TMEM142A

Function
Ca(2+) release-activated Ca(2+) (CRAC) channel subunit which mediates Ca(2+) influx following depletion of intracellular Ca(2+) stores and channel activation by the Ca(2+) sensor, STIM1 (PubMed:16582901, PubMed:16645049, PubMed:16733527, PubMed:16766533, PubMed:16807233, PubMed:19249086, PubMed:23307288, PubMed:24351972, PubMed:24591628, PubMed:28219928, PubMed:20354224, PubMed:26956484). CRAC channels are the main pathway for Ca(2+) influx in T-cells and promote the immune response to pathogens by activating the transcription factor NFAT (PubMed:16582901). Plays a prominent role in Ca(2+) influx at the basolateral membrane of mammary epithelial cells independently of the Ca(2+) content of endoplasmic reticulum or Golgi stores. May mediate transepithelial transport of large quantities of Ca(2+) for milk secretion.

Cellular Location
Cell membrane; Multi-pass membrane protein. Basolateral cell membrane {ECO:0000250|UniProtKB:Q8BWG9}; Multi-pass membrane protein. Note=Isoform beta is more mobile in the plasma membrane (PubMed:23307288). Colocalizes with STIM1 at the cell membrane (PubMed:27185316).

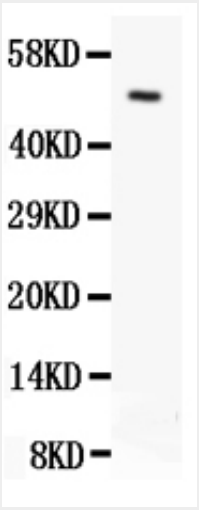
Tissue Location
Expressed in naive CD4 and CD8 T cells (at protein level) (PubMed:26956484). Expressed at similar levels in naive and effector T helper cells (PubMed:20354224)

Anti-Orai1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Orai1 Antibody - Images



Anti- Orai1 antibody, ABO11166, Western blottingAll lanes: Anti Orai1 (ABO11166) at 0.5ug/mlWB: SKOV Whole Cell Lysate at 40ugPredicted bind size: 33KDObserved bind size: 50KD

Anti-Orai1 Antibody - Background

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 selectiveÂ ion channelÂ that in humans is encoded by theÂ ORAI1Â gene. Orai1 channels play an important role in the activation of T-lymphocytes. The loss of function mutation of Orai1 causesÂ 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 4Â transmembraneÂ domains and form tetramers.Â Prakriya et al.(2006) 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.Â Prakriya et al.(2006)Â 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.