

ORAI1 Antibody [6D11A11]
Catalog # ASC12008**Specification****ORAI1 Antibody [6D11A11] - Product Information**

Application	WB
Primary Accession	Q96D31
Other Accession	Q96D31 , 84876
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Calculated MW	Predicted: 33 kDa

Application Notes	Observed: 50 kDa KDa ORAI1 antibody can be used for detection of ORAI1 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.
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ORAI1 Antibody [6D11A11] - Additional InformationGene ID **84876****Target/Specificity**

Mouse monoclonal ORAI1 antibody was raised against a 16 amino acid synthetic peptide from near the carboxy terminus of human ORAI1.

Reconstitution & Storage

ORAI1 monoclonal antibody can be stored at -20°C, stable for one year.

Precautions

ORAI1 Antibody [6D11A11] is for research use only and not for use in diagnostic or therapeutic procedures.

ORAI1 Antibody [6D11A11] - 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](http://www.uniprot.org/citations/16582901), PubMed: [16645049](http://www.uniprot.org/citations/16645049), PubMed: [16733527](http://www.uniprot.org/citations/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

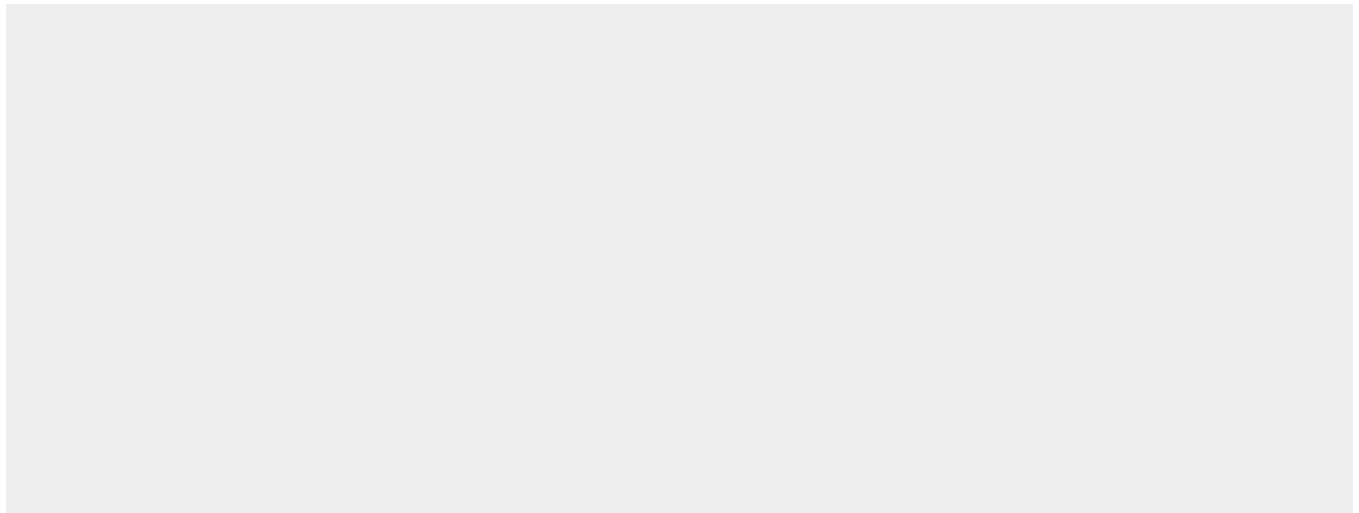
Expressed in naive CD4 and CD8 T cells (at protein level) (PubMed:26956484). Expressed at similar levels in naive and effector T helper cells (PubMed:20354224)

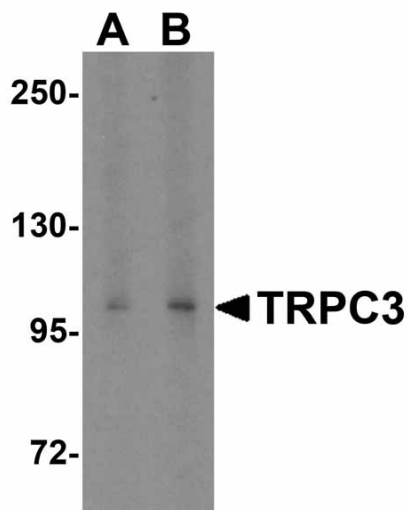
ORAI1 Antibody [6D11A11] - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

ORAI1 Antibody [6D11A11] - Images





Western blot analysis of TRPC3 in human heart tissue lysate with TRPC3 antibody at (A) 1 and (B) 2 µg/mL.

ORAI1 Antibody [6D11A11] - Background

ORAI1 Monoclonal Antibody: Antigen stimulation of immune cells triggers Ca^{++} entry through Ca^{++} release-activated Ca^{++} (CRAC) channels. ORAI1 is a recently identified four-transmembrane spanning protein that is an essential component of CRAC. A missense mutation in this protein in humans is the cause of one form of hereditary severe combined immune deficiency (SCID) which results in ablated T-cell Ca^{++} entry. It has been suggested that ORAI1 functions as a highly selective Ca^{++} plasma membrane channel that is gated through interactions with STIM1, the store-activated endoplasmic reticulum Ca^{++} sensor.

ORAI1 Antibody [6D11A11] - References

- Lewis RS. Calcium signaling mechanisms in T lymphocytes. *Annu. Rev. Immunol.* 2001; 19:497-521.
- Feske S, Gwack Y, Prakriya M, et al. A mutation in *Orai1* causes immune deficiency by abrogating CRAC channel function. *Nature* 2006; 441:179-85.
- Soboloff J, Spassova MA, Dziadek MA, et al. Calcium signals mediated by STIM and Orai proteins - a new paradigm in inter-organelle communication. *Biochim. Biophys. Acta.* 2006; 1763:1161-8.