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ORAI1 Antibody [3F6H5]

Catalog # ASC12007

Specification

ORAI1 Antibody [3F6H5] - Product Information

Application	**WB**
Primary Accession	Q96D31
Other Accession	Q96D31, 84876
Reactivity	**Human, Mouse, Rat**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**Predicted: 33 kDa** **Observed: 56 kDa KDa**
Application Notes	**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.**

ORAI1 Antibody [3F6H5] - Additional Information

Gene 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℃, stable for one year.

Precautions
ORAI1 Antibody [3F6H5] is for research use only and not for use in diagnostic or therapeutic procedures.

ORAI1 Antibody [3F6H5] - 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)

ORAI1 Antibody [3F6H5] - 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

ORAI1 Antibody [3F6H5] - Images

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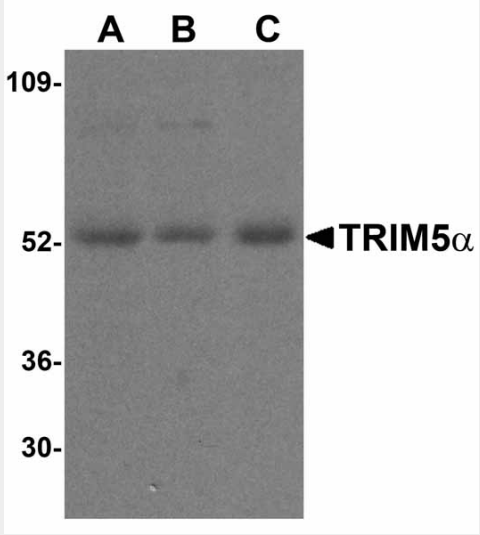

Western blot analysis of TRIM5 alpha expression in human stomach (A), thymus (B), and uterus (C) cell lysate with TRIM5 alpha antibody at 2 µg/mL.

ORAI1 Antibody [3F6H5] - 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 fo rm 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 often migrates at a higher than expected molecular weight in SDS-PAGE. This antibody is predicted to have no cross-reactivity to ORAI2 or ORAI3.

ORAI1 Antibody [3F6H5] - 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.