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Anti-ORAI1 (RABBIT) Antibody
ORAI1 Antibody
Catalog # ASR3775

Specification

Anti-ORAI1 (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, E, I, LCI**
Application Note	**Anti-ORAI-1 has been tested for use in western blotting. Specific conditions for reactivity should be optimized by the end user. Expect bands approximately 32.7 kDa by western blotting in the appropriate cell lysate or extract.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.01 M Sodium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**This whole rabbit serum was prepared by repeated immunizations with a recombinant fusion protein.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-ORAI1 (RABBIT) Antibody - Additional Information

Gene ID 84876

Other Names
84876

Purity
Anti-ORAI-1 antibody is directed against the human ORAI-1. The product was prepared from monospecific antiserum by delipidation and defibrination. The antiserum was further cross-absorbed against MBP by chromatography. Cross-reactivity with ORAI1 from other sources have not been determined.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-ORAI1 (RABBIT) Antibody - Protein Information

Name ORAI1 {ECO:0000303|PubMed:16921383, ECO:0000312|HGNC:HGNC:25896}

Function
Pore-forming subunit of two major inward rectifying Ca(2+) channels at the plasma membrane: Ca(2+) release-activated Ca(2+) (CRAC) channels and arachidonate-regulated Ca(2+)-selective (ARC) channels (Probable) (PubMed:16645049, PubMed:16733527, PubMed:16807233, PubMed:16921383, PubMed:19249086, PubMed:19706554, PubMed:23307288, PubMed:26956484, PubMed:28219928). Assembles with ORAI2 and ORAI3 to form hexameric CRAC channels that mediate Ca(2+) influx upon depletion of endoplasmic reticulum Ca(2+) store and channel activation by Ca(2+) sensor STIM1, a process known as store-operated Ca(2+) entry (SOCE). Various pore subunit combinations may account for distinct CRAC channel spatiotemporal and cell-type specific dynamics. ORAI1 mainly contributes to the generation of Ca(2+) plateaus involved in sustained Ca(2+) entry and is dispensable for cytosolic Ca(2+) oscillations, whereas ORAI2 and ORAI3 generate oscillatory patterns. CRAC channels assemble in Ca(2+) signaling microdomains where Ca(2+) influx is coupled to calmodulin and calcineurin signaling and activation of NFAT transcription factors recruited to ORAI1 via AKAP5. Activates NFATC2/NFAT1 and NFATC3/NFAT4-mediated transcriptional responses. CRAC channels are the main pathway for Ca(2+) influx in T cells and promote the immune response to pathogens by activating NFAT-dependent cytokine and chemokine transcription (PubMed:16582901, PubMed:17442569, PubMed:19182790, PubMed:20354224, PubMed:22641696, PubMed:26221052, PubMed:32415068, PubMed:33941685). Assembles with ORAI3 to form channels that mediate store-independent Ca(2+) influx in response to inflammatory metabolites arachidonate or its derivative leukotriene C4, termed ARC and LRC channels respectively (PubMed:19622606, PubMed:32415068). 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 (By similarity) (PubMed:20887894).

Cellular Location
Cell membrane; Multi-pass membrane protein. Basolateral cell membrane {ECO:0000250|UniProtKB:Q8BWG9}; Multi-pass membrane protein. Note=Upon store depletion, colocalizes with STIM1 in membrane punctae at ER-PM junctions (PubMed:19182790, PubMed:19249086, PubMed:26221052, PubMed:27185316) [Isoform beta]: Cell membrane

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 (RABBIT) Antibody - Protocols

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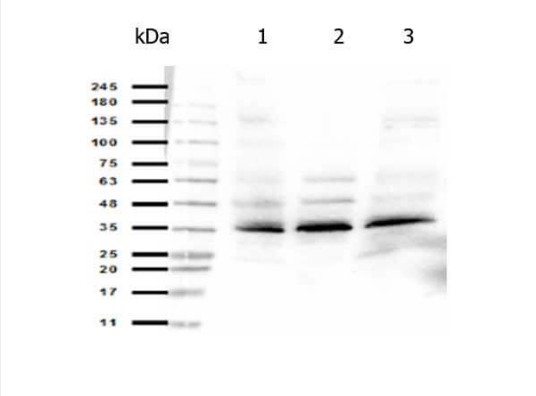
Provided below are standard protocols that you may find useful for product applications.

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

Anti-ORAI1 (RABBIT) Antibody - Images



Western Blot of Rabbit anti-ORAI-1 antibody. Marker: Opal Pre-stained ladder (p/n MB-210-0500). Lane 1: MOLT-4 WCL (p/n W09-001-GK2). Lane 2: MDA-MB-435 WCL (p/n W09-001-A39). Lane 3: Jurkat WCL (p/n W09-001-370). Load: 35 µg per lane. Primary antibody: ORAI-1 antibody at 1:1,000 for 3 hrs at RT. Secondary antibody: Peroxidase rabbit secondary antibody (p/n 611-103-122) at 1:30,000 for 60 min at RT. Blocking Buffer: 1% Casein-TTBS for 30 min at RT. Predicted/Observed size: 32 kDa for ORAI-1.

Anti-ORAI1 (RABBIT) Antibody - Background

The ORAI-1 gene codes for the calcium release-activated calcium (CRAC) channel subunit in humans. The CRAC channel subunit mediates calcium influx when activated by the calcium sensor, STIM1, following depletion of intracellular calcium stores. CRAC channels are the primary pathway for calcium influx in T-cells and promote the immune response to pathogens through activation of the transcription factor NFAT. Defects in this gene can be a cause of immune dysfunction due to inactivation of T-cells.