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Anti-Orai1 Rabbit Monoclonal Antibody
Catalog # ABO15211

Specification

Anti-Orai1 Rabbit Monoclonal Antibody - Product Information

Application	**WB**
Primary Accession	Q96D31
Host	**Rabbit**
Isotype	**IgG**
Reactivity	**Human**
Clonality	**Monoclonal**
Format	**Liquid**

Description
Anti-Orai1 Rabbit Monoclonal Antibody . Tested in WB application. This antibody reacts with Human.

Anti-Orai1 Rabbit Monoclonal Antibody - Additional Information

Gene ID 84876

Other Names
Calcium release-activated calcium channel protein 1, Protein orai-1, Transmembrane protein 142A, ORAI1 {ECO:0000303|PubMed:16921383, ECO:0000312|HGNC:HGNC:25896}

Application Details
WB 1:500-1:2000

Contents
Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen
A synthesized peptide derived from human Orai1

Purification
Affinity-chromatography

Storage	**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

Anti-Orai1 Rabbit Monoclonal 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 Monoclonal Antibody - Protocols

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

- Western Blot

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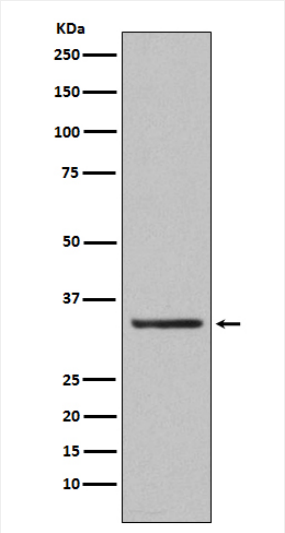
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Orai1 Rabbit Monoclonal Antibody - Images



Western blot analysis of Orai1 expression in human platelet lysate.