Datasheet for 600-401-DG9

ORAI1 Antibody

Overview

Description:	Anti-ORAI1 (RABBIT) Antibody - 600-401-DG9
Item No.:	600-401-DG9
Size:	100 µg
Applications:	ELISA, IF, IHC, WB, FC, IP
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	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.
Synonyms:	ORAI1 Antibody, IMD9, ORAT1, CRACM1, TMEM142A, Calcium release-activated calcium channel protein 1, Protein orai-1
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	ORAI1
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-ORAI1 antibody was prepared from whole rabbit serum produced by repeated immunizations with a 16 amino acid synthetic peptide from near the C-terminus of human ORAI1.

Purity/Specificity:	Anti-ORAI1 Antibody was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody is predicted to have no cross-reactivity to ORAI2 or ORAI3.
Relevant Links:	• UniProtKB - Q96D31 • GeneID - 84876 • NCBI - NP_116179.2

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Suggested Applications:	FC, IP (Based on references)
Application Note:	Anti-ORAI1 Antibody has been tested for use in ELISA, Western Blotting, immunofluorescence, and Immunohistochemistry. Specific conditions for reactivity should be optimized by the end user. Expect a band at approximately 33 kDa in Western Blots of specific cell lysates and tissues.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000-1:20,000
IF:	User Optimized
IHC:	2.5 µg/mL
WB:	.5-2 µg/mL

Formulation

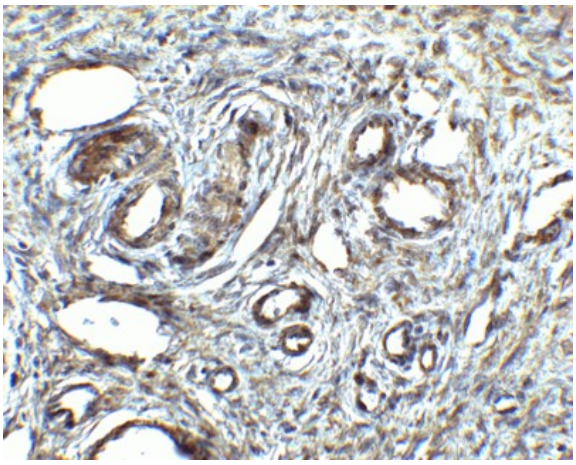
Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2
Preservative:	0.09% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

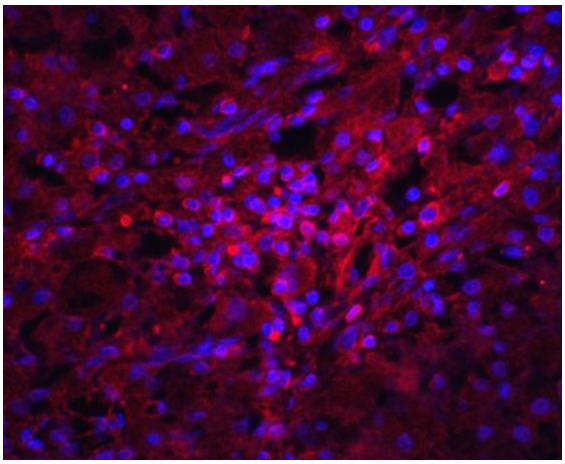
Shipping Condition:	Dry Ice

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.
Expiration:	Expiration date is one (1) year from date of receipt.

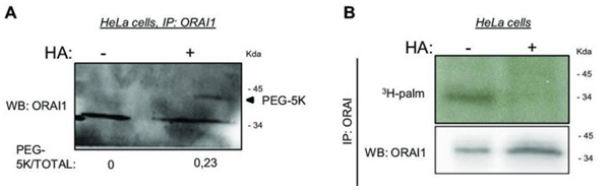
Images



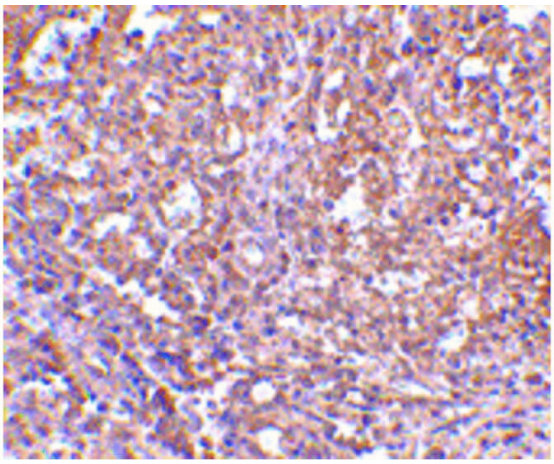
Immunohistochemistry
Immunohistochemistry of ORAI1 in human ovary tissue with ORAI1 antibody at 2.5 µg/ml.



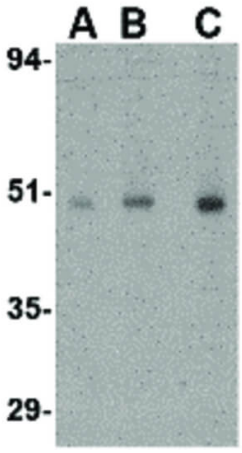
Immunofluorescence Microscopy
Immunohistochemistry of ORAI1 in human spleen tissue with ORAI1 antibody at 2.5 µg/mL.



Western Blot
(A) ORAI1 immunoblot of HeLa cells treated with PEG-5k to label S-acylation sites after exposure to NEM to block free thiols and then to hydroxylamine (HA) to break acyl-thioester bonds. (B) Western blot and corresponding autoradiogram of HeLa cells labelled for 2 hr with 3H-palmitic acid with or without HA and immunoprecipitated with anti-ORAI1. Figure 1. PMID: 34913437



Immunohistochemistry
Immunohistochemistry of ORAI1 antibody. Tissue: Human spleen tissue. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: ORAI1 antibody at 2.5 µg/mL for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: ORAI1 is nuclear and cytoplasmic. Staining: ORAI1 as precipitated red signal with hematoxylin purple nuclear counterstain.



Western Blot
Western Blot of ORAI1 antibody. Lane A: Human ovary tissue lysate at 0.5 µg/mL. Lane B: Human ovary tissue lysate at 1 µg/mL. Lane C: Human ovary tissue lysate at 2 µg/mL. Load: 35 µg per lane. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 32.6 kDa, ~50 kDa for ORAI1.

References

- Carreras-Sureda A et al. S-acylation targets ORAI1 channels to lipid rafts for efficient Ca2+ signaling by T cell receptors at the immune synapse. *eLife.* (2021)

Disclaimer

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