

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: 0.02% (w/v) Sodium Azide

Stabilizer: None

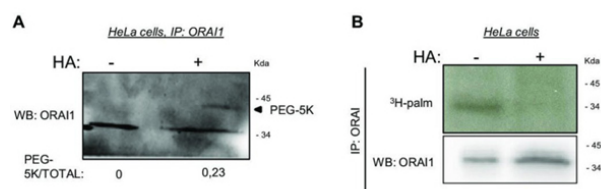
Shipping & Handling

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.

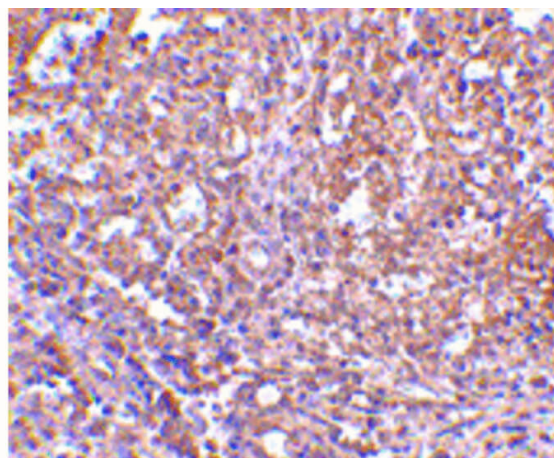
Expiration: Expiration date is one (1) year from date of receipt.

Images



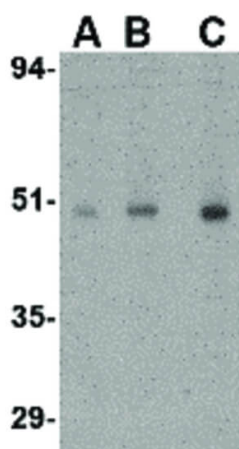
Western Blot

(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 $\mu\text{g/mL}$. Lane B: Human ovary tissue lysate at 1 $\mu\text{g/mL}$. Lane C: Human ovary tissue lysate at 2 $\mu\text{g/mL}$. 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 Ca^{2+} signaling by T cell receptors at the immune synapse. *eLife*. (2021)

Disclaimer

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