

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

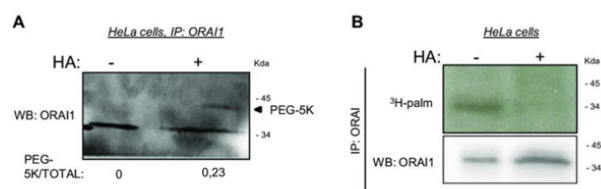
Shipping & Handling

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.

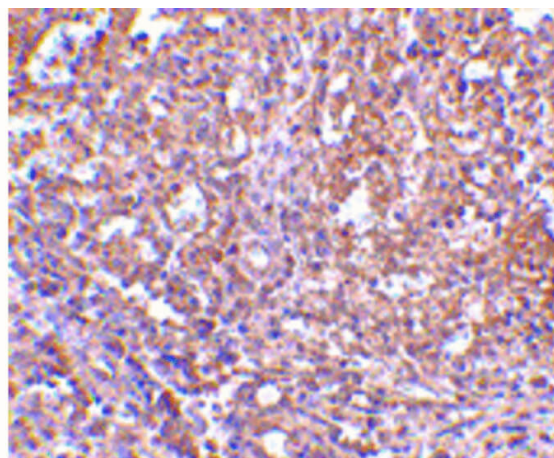
Expiration: Expiration date is one (1) year from date of receipt.

Images



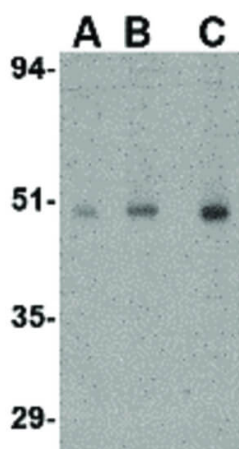
Western Blot

(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 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

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.