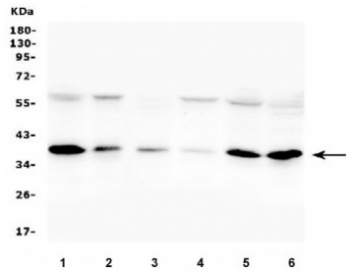
# Orai1 Antibody (RQ5543)

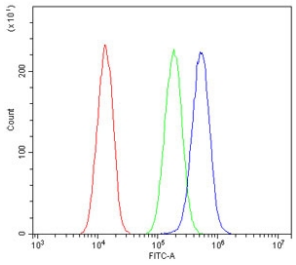
| Catalog No. | Formulation | Size |
|---|---|---|
| RQ5543 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

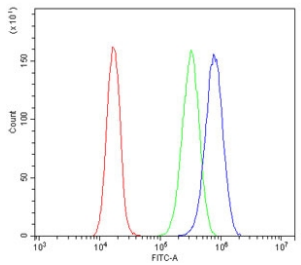
| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human |
| **Format** | Antigen affinity purified |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Affinity purified |
| **Buffer** | Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide |
| **UniProt** | Q96D31 |
| **Applications** | Western blot: 0.25-0.5ug/ml<br>Flow cytometry: 1-3ug/million cells<br>Direct ELISA: 0.1-0.5ug/ml |
| **Limitations** | This Orai1 antibody is available for research use only. |




Western blot testing of human 1) A375, 2) Jurkat, 3) A549, 4) A431, 5) HepG2 and 6) K562 cell lysate with Orai1 antibody. Predicted molecular weight: 33-50 kDa depending on glycosylation level.




Flow cytometry testing of human A549 cells with Orai1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= Orai1 antibody.




Flow cytometry testing of human Caco-2 cells with Orai1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= Orai1 antibody.

## Description

ORAI1 (ORAI calcium release-activated calcium modulator 1), also known as CRACM1, Calcium release-activated calcium channel protein 1 and TMEM142A, is a calcium selectiveion channel that in humans is encoded by the ORAI1 gene. Orai1 channels play an important role in the activation of T-lymphocytes. The loss of function mutation of Orai1 causes severe combined immunodeficiency(SCID) in humans. The mammalian orai family has two additional homologs, orai2 and orai3. Orai proteins share no homology with any other ion channel family of any other known proteins. They have 4 transmembrane domains and form tetramers. Prakriya et al. showed that ORAI1 is a PM protein, and that CRAC channel function is sensitive to mutation of 2 conserved acidic residues in the transmembrane segments. Glu106-to-asp (E106D) and glu190-to-gln (E190Q) substitutions in transmembrane helices 1 and 3, respectively, diminished calcium ion influx, increased current carried by monovalent cations, and rendered the channel permeable to cesium ion.Prakriya et al. showed that ORAI1 is a PM protein, and that CRAC channel function is sensitive to mutation of 2 conserved acidic residues in the transmembrane segments.

## Application Notes

Optimal dilution of the Orai1 antibody should be determined by the researcher.

## Immunogen

A human recombinant protein (amino acids A49-A301) was used as the immunogen for the Orai1 antibody.

## Storage

After reconstitution, the Orai1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Ordering: Phone: 858.663.9055 | Fax: 1.267.821.0800 | Email: info@nsjbio.com
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