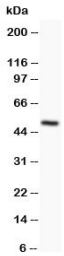
Orai1 Antibody (R30956)

Catalog No.	Formulation	Size
R30956	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q96D31
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Orai1 antibody is available for research use only.



Western blot testing of Orai1 antibody and SKOV lysate; Predicted molecular weight ~ 33 kDa; Observed size 45~50 kDa due to glycosylation

Description

Orai calcium release-activated calcium modulator 1, also known as CRACM1, 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.(2006) showed that ORAI1 is a PM protein, and that CRAC channel function is sensitive to mutation of two 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. They showed that Orai1 is a PM protein, and that CRAC channel function is sensitive to mutation of two conserved acidic residues in the transmembrane segments.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the Orai1 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the C-terminus of human Orai1 (EFARLQDQLDHRGDHPLTPGSHYA) was used as the immunogen for this 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.