

Product datasheet for **TA328752**

Orai1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, IF, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3,000; FC: 1:50-1:600
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)KFLPLKRQAGQPS, corresponding to amino acid residues 200-212 of mouse Orai1. 2nd extracellular loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN ₃ .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	ORAI calcium release-activated calcium modulator 1
Database Link:	NP_780632 Entrez Gene 304496 Rat Entrez Gene 109305 Mouse Q8BWG9



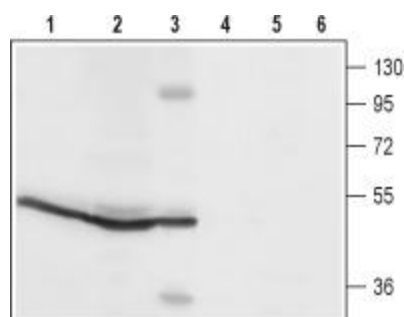
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Background:

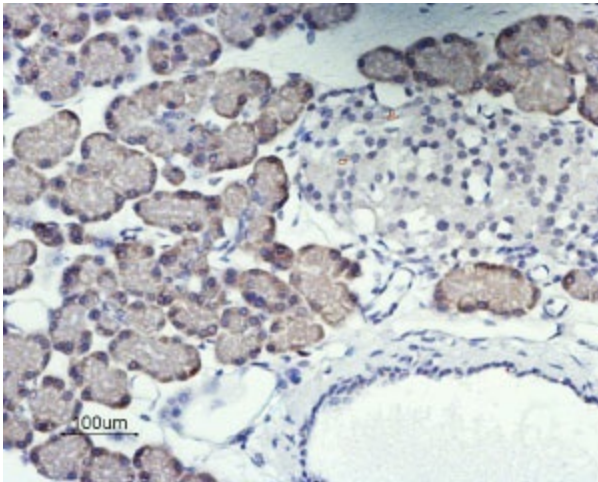
Cytosolic calcium (Ca²⁺) has long been known to act as a key second messenger in many intracellular pathways including synaptic transmission, muscle contraction, hormonal secretion, cell growth and proliferation. Intracellular Ca²⁺ levels are controlled by either the influx of Ca²⁺ through the calcium-release-activated Ca²⁺ channels (CRAC), or from intracellular stores which gained much attention. Recently, several key players of the store operated complex have been identified. Orai1 (also known as CRACM1) acts as the store operated Ca²⁺ channel (SOC) and STIM1, which acts as the endoplasmic reticulum Ca²⁺ sensor. The formation of functional channels requires the presence of both Orai1 and STIM1 proteins working as a complex and involves the co-clustering of Orai1 on the plasma membrane with STIM1 on the endoplasmic reticulum. TRPC1, a member of the transient receptor potential family was also suggested to act as a player in the SOC complex. In T-cells, Ca²⁺ entry following activation by antigen-receptor engagement occurs solely through CRAC channels where Orai1 constitutes the pore forming subunit. Orai1 is a plasma membrane protein with four potential transmembrane domains and intracellular N- and C-terminus. In addition, two mammalian homologs to Orai1 have been identified; Orai2 and Orai3. All three, Orai1 Orai2 and Orai3, are capable of forming store operated channels with different magnitudes.

Synonyms:

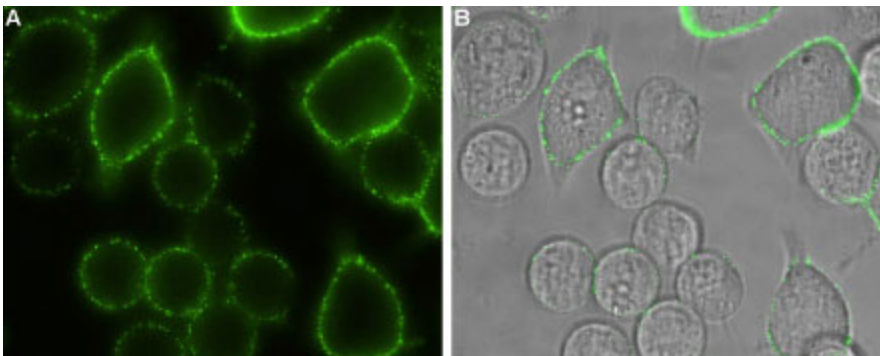
CRACM1; FLJ14466; ORAT1; TMEM142A

Product images:

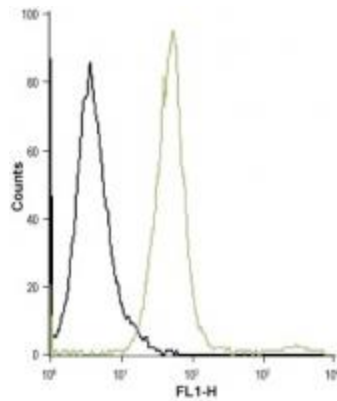
Western blot analysis of rat spleen (lanes 1 and 4), rat pancreas (lanes 2 and 5) and mouse B-cell lymphoma (WEHI) (lanes 3 and 6) lysates: 1-3. Anti-Orai1 (extracellular) antibody, (1:200). 4-6. Anti-Orai1 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of Orai1 in rat pancreas. Immunohistochemical staining of rat pancreas paraffin embedded sections using Anti-Orai1 (extracellular) antibody, (1:50). Orai1 (brown) is expressed in acinar cells. Hematoxylin is used as the counterstain.



Expression of Orai1 in rat RBL cells. Immunocytochemical staining of intact living rat basophilic leukemia (RBL) cells. A. Extracellular staining of cells using Anti-Orai1 (extracellular) antibody, (1:100) followed by goat anti-rabbit-AlexaFluor-488 secondary antibody (green). B. Merge of A and Live view of the cells.



Indirect flow cytometry analysis of WEHI living cells: black line, Unstained cells. green line, Cells + Anti-Orai1 (extracellular) antibody, (10 μg/0.5 x 10⁶ cells).