

#3280 Store at -20°C

# Orai1 (D90B10) Rabbit mAb



✓ 100 µl  
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #109305  
Swiss-Prot Acc. #A3KCG1

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, M, R, Mk	32 kDa	Rabbit IgG**

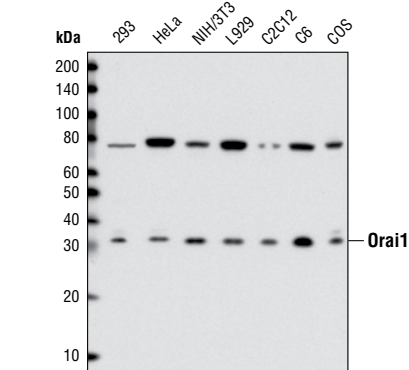
**Background:** Calcium is a key second messenger in many intracellular signaling pathways. Ca<sup>2+</sup> signals control many cellular functions ranging from short term responses such as contraction and secretion to longer term regulation of cell growth and proliferation (1,2). Orai1 is the Ca<sup>2+</sup> release-activated Ca<sup>2+</sup> (CRAC) channel subunit which mediates Ca<sup>2+</sup> influx following depletion of intracellular Ca<sup>2+</sup> stores and channel activation by the Ca<sup>2+</sup> sensor, STIM1 (3). The STIM1 and Orai1 are required for functional CRAC current and their co-expression leads to greatly amplified CRAC currents (4-7). There are three human homologues, Orai1, Orai2 and Orai3, which have been shown to be capable of forming store-operated channels (3, 5, 8). The Orai1, -2, and -3 channels are similarly inhibited by extracellular Ca<sup>2+</sup>, and Orai3 channels appeared to differ from Orai1 and -2 in being somewhat resistant to the process of Ca<sup>2+</sup> depotentiation (9).

**Specificity/Sensitivity:** Orai1 (D90B10) Rabbit mAb detects endogenous levels of total Orai1 protein. The antibody also cross-reacts with an unidentified protein at 78 kDa.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide derived from the sequence of mouse Orai1.

**Background References:**

- (1) Berridge, M.J. et al. (2000) *Nat Rev Mol Cell Biol* 1, 11-21.
- (2) Berridge, M.J. et al. (2003) *Nat Rev Mol Cell Biol* 4, 517-29.
- (3) Vig, M. et al. (2006) *Science* 312, 1220-3.
- (4) Zhang, S.L. et al. (2006) *Proc Natl Acad Sci USA* 103, 9357-62.
- (5) Mercer, J.C. et al. (2006) *J Biol Chem* 281, 24979-90.
- (6) Peinelt, C. et al. (2006) *Nat Cell Biol* 8, 771-3.
- (7) Soboloff, J. et al. (2006) *J Biol Chem* 281, 20661-5.
- (8) Vig, M. et al. (2006) *Curr Biol* 16, 2073-9.
- (9) DeHaven, W.I. et al. (2007) *J Biol Chem* 282, 17548-56.



Western blot analysis of extracts from various cell lines using Orai1 (D90B10) Rabbit mAb.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**  
Western blotting 1:1000

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

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**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.