

#4916 Store at -20°C

STIM1 Antibody



✓ 100 µl
(10 western blots)

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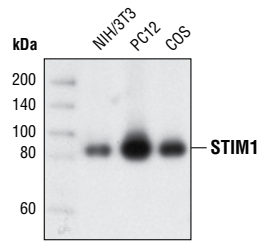
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, M, R, Mk	80 kDa	Rabbit**

Background: Ca²⁺ is a key second messenger in many intracellular signaling pathways. Ca²⁺ 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). Stromal interaction molecules (STIMs) function as Ca²⁺ sensors to detect changes in Ca²⁺ content in intracellular Ca²⁺ stores (3). STIM1 is conserved and ubiquitously expressed and functions as an endoplasmic reticulum Ca²⁺ sensor that that migrates from the endoplasmic Ca²⁺ store to the plasma membrane to activate calcium-release-activated calcium (CRAC) channels when the endoplasmic Ca²⁺ store is low (4). STIM1 is a potential tumor suppressor; defects in STIM1 may cause rhabdomyosarcoma and rhabdoid tumors (5). STIM1 can either homodimerize or form heterodimers with STIM2. STIM2 possesses a high sequence identity to STIM1 and can function as an inhibitor of STIM1-mediated plasma membrane store-operated Ca²⁺ entry (6), however its true physiological function still requires further investigation.

Specificity/Sensitivity: STIM1 Antibody detects endogenous levels of total STIM1 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide derived from the sequence of human STIM1. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from NIH/3T3, PC12 and COS cells using STIM1 Antibody.

Entrez-Gene ID # 6786
Swiss-Prot Acc. # Q13586

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. 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
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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) Zheng, L. et al. (2007) *Biochem Biophys Res Commun.*
- (4) Zhang, S.L. et al. (2005) *Nature* 437, 902–5.
- (5) Manji, S.S. et al. (2000) *Biochim Biophys Acta* 1481, 147–55.
- (6) Soboloff, J. et al. (2006) *Curr Biol* 16, 1465–70.

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

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.