Revision 1

#5668 Store at -20C

STIM1 (D88E10) Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC	H M R Mk B	Endogenous	85	Rabbit IgG	#Q13586	6786

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunofluorescence (Immunocytochemistry)	1:800

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.

Specificity / Sensitivity

STIM1 (D88E10) Rabbit mAb recognizes endogenous levels of total STIM1 protein. The antibody does not cross-react with STIM2.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro622 of human STIM1 protein.

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 that detect changes in Ca2+ content in intracellular Ca2+ stores (3). STIM1 is conserved, ubiquitously expressed, and functions as an endoplasmic reticulum (ER) Ca2+ sensor that migrates from the ER Ca2+ store to the plasma membrane where it activates calcium-release-activated calcium (CRAC) channels when the ER 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, further investigation is required to elucidate the true physiological function of STIM2.

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. (2008) *Biochem Biophys Res Commun* 369, 240-6.
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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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 **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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