

STIM1 Antibody



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For Research Use Only. Not for Use in Diagnostic Procedures.

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

Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

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.

Specificity/Sensitivity

STIM1 Antibody detects endogenous levels of total STIM1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy-terminus of human STIM1. Antibodies are purified by protein A and peptide affinity chromatography.

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

- Berridge, M.J. et al. (2000) *Nat Rev Mol Cell Biol* 1, 11-21.
- Berridge, M.J. et al. (2003) *Nat Rev Mol Cell Biol* 4, 517-29.
- Zheng, L. et al. (2008) *Biochem Biophys Res Commun* 369, 240-6.
- Zhang, S.L. et al. (2005) *Nature* 437, 902-5.
- Manji, S.S. et al. (2000) *Biochim Biophys Acta* 1481, 147-55.
- 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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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