

STIM1 (G555) Antibody

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

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

Applications: W, IP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 85	Source/Isotype: Rabbit	UniProt ID: #Q13586	Entrez-Gene Id: 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 (G555) Antibody detects endogenous levels of total STIM1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the region surrounding Gly555 of human STIM1 protein. 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

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.