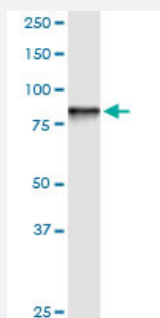


STIM1 monoclonal antibody (M01), clone 5A2

Catalog # H00006786-M01

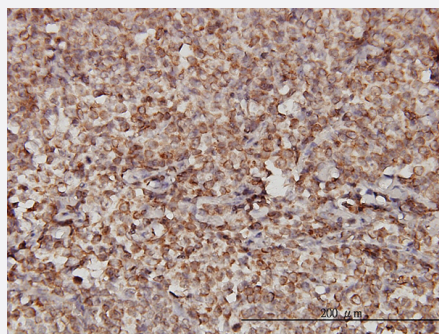
Size 100 ug

Applications



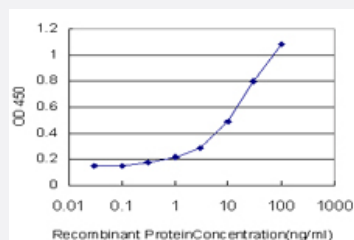
Western Blot (Tissue lysate)

STIM1 monoclonal antibody (M01), clone 5A2. Western Blot analysis of STIM1 expression in human liver.



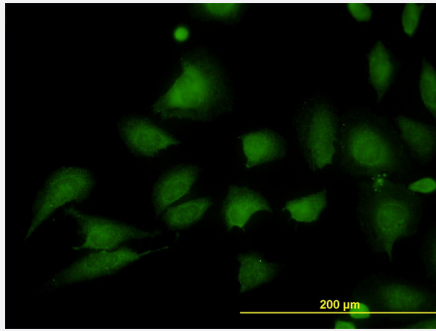
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to STIM1 on formalin-fixed paraffin-embedded human malignant lymphoma, diffuse large B. [antibody concentration 3 ug/ml]



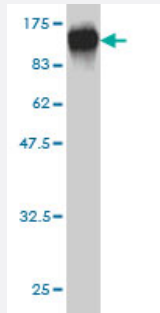
Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged STIM1 is approximately 0.3ng/ml as a capture antibody.



Immunofluorescence

Immunofluorescence of monoclonal antibody to STIM1 on HeLa cell. [antibody concentration 10 ug/ml]



Western Blot detection against Immunogen (98.56 KDa) .

Specification

Product Description	Mouse monoclonal antibody raised against a full length recombinant STIM1.
Immunogen	STIM1 (AAH21300, 24 a.a. ~ 685 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Sequence	SHSHSEKATGTSSGANSEESTAAEFCDKPLCHSEDEKLSFEAVRNHKLMDDDANGDVDVEE SDEFLREDLNYHDPTVKHSTFHGEDKLISVEDLWKAWKSSEVYNWTVDEVVQWLITYVELPQYE ETFRKLQLSGHAMPRLAVTNTTMTGAVLKMTDRSHRQKLQLKALDTVLFGPPLLTRHNHLKDFML VVSIVIGVGGCWFAYIQNRYSKEHMKMMKDLEGLHRAEQSLHDLQERLHKAQEEHRTVEVEKV HLEKKLRDEINLAKQEAQRLKELREGTENERSRQKYAEELQVREALRKAKEKELESHSSWYAP EALQKWQLTHEVEVQYNIKKQNAEKQLLVAKEGAEKIKKKRNTLFGTFHVAHSSSLDDVDHKIL TAKQALSEVTAALRERLHRWQQEILCGFQVNNPGIHSLVAALNIDPSWMGSTRPNPAHFIMTDDV DDMDEEVSPLSMQSPSLQSSVRQLTEPQHGLGSQRDLTHSDSESSLHMSDRQRVAPKPPQM SRAADEALNAMTSNGSHRLIEGVHPGSLVEKLPDSPALAKKALLALNHGLDKAHSLMELSPSAP PGGSPHLDSSSRSHSPSPDPDTPSPVGDSRALQASRNTRIPHLAGKKAVAEEDNGSIGEETDSS PGRKKFPLKIFKKPLKK
Host	Mouse
Reactivity	Human, Rat
Isotype	IgG2a Kappa
Quality Control Testing	Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (98.56 KDa) .

Storage Buffer

In 1x PBS, pH 7.4

Storage Instruction

Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Applications

- Western Blot (Tissue lysate)

STIM1 monoclonal antibody (M01), clone 5A2. Western Blot analysis of STIM1 expression in human liver.

[Protocol Download](#)

- Western Blot (Recombinant protein)

[Protocol Download](#)

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to STIM1 on formalin-fixed paraffin-embedded human malignant lymphoma, diffuse large B. [antibody concentration 3 ug/ml]

[Protocol Download](#)

- Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged STIM1 is approximately 0.3ng/ml as a capture antibody.

[Protocol Download](#)

- ELISA

- Immunofluorescence

Immunofluorescence of monoclonal antibody to STIM1 on HeLa cell. [antibody concentration 10 ug/ml]

Gene Info — STIM1

Entrez GeneID[6786](#)**GeneBank Accession#**[BC021300](#)**Protein Accession#**[AAH21300](#)**Gene Name**

STIM1

Gene Alias

D11S4896E, GOK

Gene Description	stromal interaction molecule 1
Omim ID	605921
Gene Ontology	Hyperlink
Gene Summary	This gene encodes a type 1 transmembrane protein that mediates Ca ²⁺ influx after depletion of intracellular Ca ²⁺ stores by gating of store-operated Ca ²⁺ influx channels (SOCs). It is one of several genes located in the imprinted gene domain of 11p15.5, an important tumor-suppressor gene region. Alterations in this region have been associated with the Beckwith-Wiedemann syndrome, Wilms tumor, rhabdomyosarcoma, adrenocortical carcinoma, and lung, ovarian, and breast cancer. This gene may play a role in malignancies and disease that involve this region, as well as early hematopoiesis, by mediating attachment to stromal cells. This gene is oriented in a head-to-tail configuration with the ribonucleotide reductase 1 gene (RRM1), with the 3' end of this gene situated 1.6 kb from the 5' end of the RRM1 gene
Other Designations	-

Publication Reference

- [BAX inhibitor-1 is a Ca²⁺ channel critically important for immune cell function and survival.](#)

Lisak D, Schacht T, Gawlitza A, Albrecht P, Aktas O, Koop B, Gliem M, Hofstetter HH, Zanger K, Bultynck G, Parys JB, De Smedt H, Kindler T, Adams-Quack P, Hahn M, Waisman A, Reed JC, Hovelmeier N, Methner A.

Cell Death and Differentiation 2016 Feb; 23(2):358.

Application: WB, Mouse, Splenocytes

- [IL-9 induces IL-8 production via STIM1 activation and ERK phosphorylation in epidermal keratinocytes: A plausible mechanism of IL-9R in atopic dermatitis.](#)

Hong CH, Chang KL, Wang HJ, Yu HS, Lee CH.

Journal of Dermatological Science 2015 Jun; 78(3):206.

Application: IF, Human, Keratinocytes

- [Identification of stim1 as a candidate gene for exaggerated sympathetic response to stress in the stroke-prone spontaneously hypertensive rat.](#)

Ferdaus MZ, Xiao B, Ohara H, Nemoto K, Harada Y, Saar K, Hubner N, Isomura M, Nabika T.

PLoS One 2014 Apr; 9(4):e95091.

Application: WB-Ti, Rat, Brainstem

- [Store-Operated Ca\(2\) \(+\) Entry \(SOCE\) Regulates Melanoma Proliferation and Cell Migration.](#)

Umemura M, Baljinnyam E, Feske S, De Lorenzo MS, Xie LH, Feng X, Oda K, Makino A, Fujita T, Yokoyama U, Iwatsubo M, Chen S, Goydos JS, Ishikawa Y, Iwatsubo K.

PLoS One 2014 Feb; 9(2):e89292.

Application: IHC, Human, Melanoma

- [SGK3 regulates Ca\(2+\) entry and migration of dendritic cells.](#)

Schmid E, Bhandaru M, Nurbaeva MK, Yang W, Szteyn K, Russo A, Leibrock C, Tyan L, Pearce D, Shumilina E, Lang F.
Cellular Physiology and Biochemistry 2012 Nov; 30(6):1423.

Application: WB-Ce, WB-Tr, Mouse, Dendritic cells

- [Lysophosphatidic Acid Promotes Cell Migration through STIM1- and Orai1-Mediated Ca\(2+\)\(i\) Mobilization and NFAT2 Activation.](#)

Jans R, Mottram L, Johnson DL, Brown AM, Sikkink S, Ross K, Reynolds NJ.
The Journal of Investigative Dermatology 2012 Oct; 133(3):793.

Application: WB-Ce, Human, Keratinocyte

- [Stromal interaction molecule 1 \(STIM1\) is involved in the regulation of mitochondrial shape and bioenergetics and plays a role in oxidative stress.](#)

Henke N, Albrecht P, Pfeiffer A, Toutzaris D, Zanger K, Methner A.
The Journal of Biological Chemistry 2012 Dec; 287(50):42042.

Application: WB-Ce, WB-Tr, Mouse, MEFs

- [Intracellular cyclophilin A is an important Ca\(2+\) regulator in platelets and critically involved in arterial thrombus formation.](#)

Elvers M, Herrmann A, Seizer P, Münzer P, Beck S, Schönberger T, Borst O, Martin-Romero FJ, Lang F, May AE, Gawaz M.
Blood 2012 Aug; 120(6):1317.

Application: IP, WB, Mouse, Mouse platelets

- [Transcription factor NF-κB regulates the expressions of a pore-forming unit, Orai1, and its activator, STIM1, to control Ca2+ entry and affect cellular functions.](#)

Eylenstein A, Schmidt S, Gu S, Yang W, Schmid E, Schmidt EM, Alesutan I, Szteyn K, Regel I, Shumilina E, Lang F.
The Journal of Biological Chemistry 2012 Jan; 287(4):2719.

Application: IF, WB-Tr, Human, HEK293cells

- [Store-operated calcium entry modulates neuronal network activity in a model of chronic epilepsy.](#)

Steinbeck JA, Henke N, Opatz J, Gruszczynska-Biegala J, Schneider L, Theiss S, Hamacher N, Steinfarz B, Golz S, Brustle O, Kuznicki J, Methner A.
Experimental Neurology 2011 Dec; 232(2):185.

Application: WB-Ce, WB-Ti, Mouse, Astrocytes, Neurons, Tissues

- [STIM1 as a key regulator for Ca2+ homeostasis in skeletal-muscle development and function.](#)

Kiviluoto S, Decuyper JP, De Smedt H, Missiaen L, Parys JB, Bultynck G.
Skeletal Muscle 2011 Apr; 1(1):16.

Application: WB-Ce, Mouse, C2C12 cells

- [Identification of functional domains and novel binding partners of STIM proteins.](#)

Saitoh N, Oritani K, Saito K, Yokota T, Ichii M, Sudo T, Fujita N, Nakajima K, Okada M, Kanakura Y.

Journal of Cellular Biochemistry 2011 Jan; 112(1):147.

Application: IP, Human, HeLa cells

- [Stromal Interaction Molecules 1 and 2 Are Key Regulators of Autoreactive T Cell Activation in Murine Autoimmune Central Nervous System Inflammation.](#)

Schuhmann MK, Stegner D, Berna-Ero A, Bittner S, Braun A, Kleinschnitz C, Stoll G, Wiendl H, Meuth SG, Nieswandt B.

Journal of Immunology 2010 Feb; 184(3):1536.

Application: WB-Ti, Mouse, Lympho node lysates

- [Activation of TRPC1 by STIM1 in ER-PM microdomains involves release of the channel from its scaffold caveolin-1.](#)

Pani B, Ong HL, Brazer SC, Liu X, Rauser K, Singh BB, Ambudkar IS.

Proceedings of the National Academy of Sciences of the United States of America 2009 Nov; 106(47):20087.

Application: WB, Human, HSG, HEK 293 cells

- [STIM1-Independent T Cell Development and Effector Function In Vivo.](#)

Beyersdorf N, Braun A, Vogtle T, Varga-Szabo D, Galdos RR, Kissler S, Kerkau T, Nieswandt B.

Journal of Immunology 2009 Mar; 182(6):3390.

Application: WB-Ce, Mouse, Lymph node cells, Thymocytes

- [Proteome-Wide Identification of Novel Binding Partners to the Oncogenic Fusion Gene Protein, NPM-ALK, using Tandem Affinity Purification and Mass Spectrometry.](#)

Wu F, Wang P, Young LC, Lai R, Li L.

The American Journal of Pathology 2009 Feb; 174(2):361.

Application: WB-Ce, Human, SUP-M2, Karpas299

- [STIM1 is essential for Fc{gamma} receptor activation and autoimmune inflammation.](#)

Braun A, Gessner JE, Varga-Szabo D, Syed SN, Konrad S, Stegner D, Vogtle T, Schmidt RE, Nieswandt B.

Blood 2008 Oct; 113(5):1097.

Application: WB, Mouse, Mouse peritoneal macrophages

- [The calcium sensor STIM1 is an essential mediator of arterial thrombosis and ischemic brain infarction.](#)

Varga-Szabo D, Braun A, Kleinschnitz C, Bender M, Pleines I, Pham M, Renne T, Stoll G, Nieswandt B.

The Journal of Experimental Medicine 2008 Jun; 205(7):1583.

Application: WB, Mouse, Mouse platelet

- [Lipid rafts determine clustering of STIM1 in ER-plasma membrane junctions and regulation of SOCE.](#)

Pani B, Ong HL, Liu X, Rauser K, Ambudkar IS, Singh BB.

The Journal of Biological Chemistry 2008 Apr; 283(25):17333.

Application: IP-WB, Human, HEK 293, HSG cells

- [STIM1 converts TRPC1 from a receptor-operated to a store-operated channel: Moving TRPC1 in and out of lipid rafts.](#)

Alicia S, Angelica Z, Carlos S, Alfonso S, Luis V.

Cell Calcium 2008 May; 44(5):479.

Application: WB, Human, HEK 293T cells

- [An EF hand mutation in Stim1 causes premature platelet activation and bleeding in mice.](#)

Grosse J, Braun A, Varga-Szabo D, Beyersdorf N, Schneider B, Zeitlmann L, Hanke P, Schropp P, Muhlstedt S, Zorn C, Huber M, Schmittwolf C, Jagla W, Yu P, Kerkau T, Schulze H, Nehls M, Nieswandt B.

The Journal of Clinical Investigation 2007 Oct; 117(11):3540.

Application: WB, Mouse, Mouse platelets, T cells, and B cells