

Anti-STIM1 Antibody Picoband™

Catalog Number: PB9406

About STIM1

Stromal interaction molecule 1 is a protein that in humans is encoded by the STIM1 gene. STIM1 has a single transmembrane domain, and is localized to the endoplasmic reticulum, and to a lesser extent to the plasma membrane. This gene encodes a type 1 transmembrane protein that mediates Ca²⁺ influx after depletion of intracellular Ca²⁺ stores by gating of store-operated Ca²⁺ 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. Mutations in this gene are associated with fatal classic Kaposi sarcoma, immunodeficiency due to defects in store-operated calcium entry (SOCE) in fibroblasts, ectodermal dysplasia and tubular aggregate myopathy. 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. Alternative splicing of this gene results in multiple transcript variants.

Overview

Product Name	Anti-STIM1 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-STIM1 Antibody Picoband™ catalog # PB9406. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q13586

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human STIM1, identical to the related mouse and rat sequences.
Predicted Reactive Species	Hamster
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.

Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Flow Cytometry, 1-3ug/1x10⁶ cells, Human

Anti-STIM1 Antibody Picoband™ (PB9406) Images

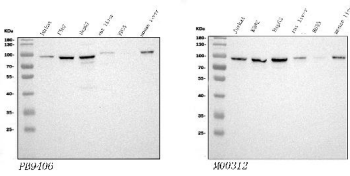


Figure 1. Western blot analysis of STIM1 using anti-STIM1 antibody (PB9406, Left) and anti-STIM1 antibody (M00312, Right).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50 ug of sample under reducing conditions.

Lane 1: human Jurakt whole cell lysates,

Lane 2: human K562 whole cell lysates,

Lane 3: human HepG2 whole cell lysates,

Lane 4: rat liver tissue lysates,

Lane 5: rat RH35 whole cell lysates,

Lane 6: mouse liver tissue lysates.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes.

Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5

hour at RT. The membrane was incubated with rabbit anti-STIM1 antigen affinity purified polyclonal antibody (Catalog # PB9406) and rabbit anti-STIM1 antigen affinity purified

monoclonal antibody (Catalog # (M00312) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times

with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced

Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for STIM1 at approximately 97KD. The expected band size for STIM1 is at 77KD.

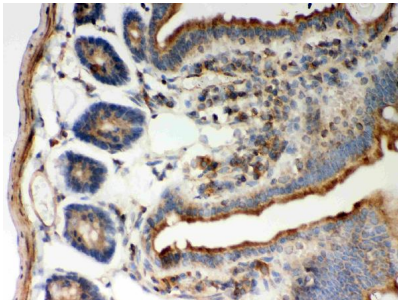


Figure 2. IHC analysis of STIM1 using anti-STIM1 antibody (PB9406).

STIM1 was detected in a paraffin-embedded section of mouse intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-STIM1 Antibody (PB9406) overnight at 4°C.

Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

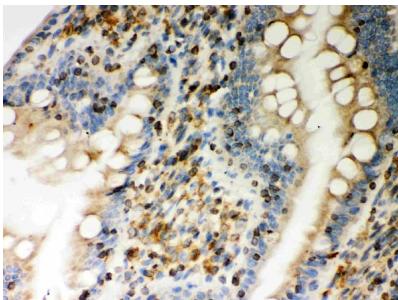


Figure 3. IHC analysis of STIM1 using anti-STIM1 antibody (PB9406).

STIM1 was detected in a paraffin-embedded section of rat intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-STIM1 Antibody (PB9406) overnight at 4°C.

Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex

(SABC) (Catalog # SA1022) with DAB as the chromogen.

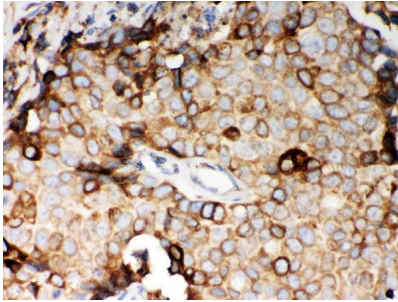


Figure 4. IHC analysis of STIM1 using anti-STIM1 antibody (PB9406).

STIM1 was detected in a paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-STIM1 Antibody (PB9406) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

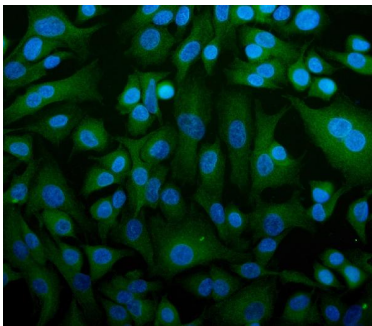


Figure 5. IF analysis of STIM1 using anti-STIM1 antibody (PB9406).

STIM1 was detected in immunocytochemical section of A549 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-STIM1 Antibody (PB9406) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

1 Publications Citing This Product

1. PubMed ID: 10.1186/s40478-017-0427-7, Calcium dysregulation, functional calpainopathy, and endoplasmic reticulum stress in sporadic inclusion body myositis

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