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Anti-STAT1 Antibody Picoband™ (monoclonal, 12C7)

Catalog Number: M00036-2

About STAT1

Signal transducer and activator of transcription 1 (STAT1) is a transcription factor which in humans is encoded by the STAT1 gene. The protein encoded by this gene is a member of the STAT protein family. In response to cytokines and growth factors, STAT family members are phosphorylated by the receptor associated kinases, and then form homo- or heterodimers that translocate to the cell nucleus where they act as transcription activators. This protein can be activated by various ligands including interferon-alpha, interferon-gamma, EGF, PDGF and IL6. This protein mediates the expression of a variety of genes, which is thought to be important for cell viability in response to different cell stimuli and pathogens. Two alternatively spliced transcript variants encoding distinct isoforms have been described.

Overview

Product Name	Anti-STAT1 Antibody Picoband™ (monoclonal, 12C7)
Reactive Species	Human, Monkey
Description	Boster Bio Anti-STAT1 Antibody Picoband™ (monoclonal, 12C7) catalog # M00036-2. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Monkey.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Monoclonal 12C7
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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	Mouse
Uniprot ID	P42224

Technical Details

Immunogen	E.coli-derived human STAT1 recombinant protein (Position: S2-A230). Human STAT1 shares 91.2% amino acid (aa) sequence identity with mouse STAT1.
Predicted Reactive Species	Hepatitis Virus
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG1
Form	Lyophilized

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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 Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Immunocytochemistry/Immunofluorescence, 2ug/ml Flow Cytometry, 1-3ug/1x10^6 cells

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Anti-STAT1 Antibody Picoband™ (monoclonal, 12C7) (M00036-2) Images

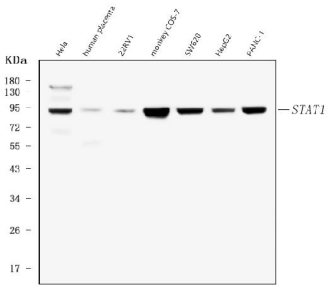

Figure 1. Western blot analysis of STAT1 using anti-STAT1 antibody (M00036-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human placenta tissue lysates,
Lane 3: human 22RV1 whole cell lysates.
Lane 4: monkey COS-7 whole cell lysates,
Lane 5: human SW620 whole cell lysates,
Lane 6: human HepG2 whole cell lysates,
Lane 7: human PANC-1 whole cell 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 mouse anti-STAT1 antigen affinity purified monoclonal antibody (Catalog # M00036-2) 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-mouse 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 # EK1001) with Tanon 5200 system. A specific band was detected for STAT1 at approximately 91KD. The expected band size for STAT1 is at 87KD.

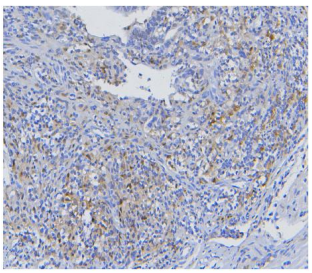

Figure 2. IHC analysis of STAT1 using anti STAT1 antibody (M00036-2).
STAT1 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-STAT1 Antibody (M00036-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

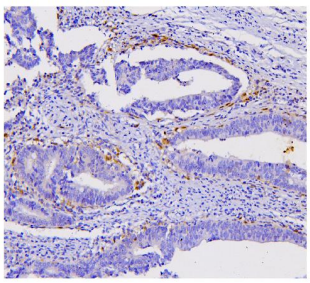

Figure 3. IHC analysis of STAT1 using anti STAT1 antibody (M00036-2).
STAT1 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-STAT1 Antibody (M00036-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

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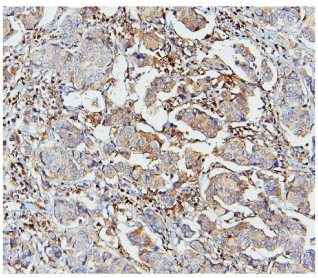

Figure 4. IHC analysis of STAT1 using anti STAT1 antibody (M00036-2).
STAT1 was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-STAT1 Antibody (M00036-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

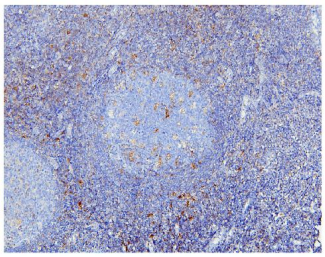

Figure 5. IHC analysis of STAT1 using anti STAT1 antibody (M00036-2).
STAT1 was detected in paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-STAT1 Antibody (M00036-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

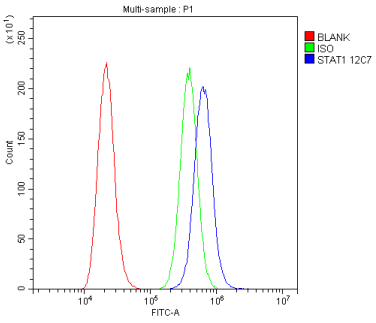

Figure 6. Flow Cytometry analysis of A431 cells using anti-STAT1 antibody (M00036-2).
Overlay histogram showing A431 cells stained with M00036-2 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-STAT1 Antibody (M00036-2, 1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

5 Publications Citing This Product

1. PubMed ID: 10.3390/ijms18030570, Blockage of Glyoxalase I Inhibits Colorectal Tumorigenesis and Tumor Growth via Upregulation of STAT1, p53, and Bax and Downregulation of c-Myc and Bcl-2

2. PubMed ID: 10.3748/wjg.v13.i30.4080, Hepatitis C Virus non-structural 5A abrogates signal transducer and activator of transcription-1 nucleartranslocation induced by IFN-alpha through dephosphorylation

3. PubMed ID: 10.1007/s00403-008-0872-z, Effects of acitretin on proliferative inhibition and RANTES production of HaCaT cells

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