

Anti-STAT5a Antibody

Catalog Number: PA1840

About STAT5A

STAT5 (Signal transducer and activator of transcription 5) also known as STAT5A, MGF, is a protein that serve the dual function of signal transducers and activators of transcription in cells exposed to signaling polypeptides. Hou et al. (1995) cloned the human STAT5 cDNA from an umbilical vein endothelial cell library and found that it encodes a 794-amino acid polypeptide with a predicted mass of approximately 90.5 kD. To analyze the possible role of STAT5 in human GH-induced proliferation, Friedrichsen et al. (2001) expressed a dominant-negative STAT5 mutant, STAT5A-delta-749, in INS-1 cells under the control of a doxycycline-inducible promoter by stable transfection. Chromatin immunoprecipitation analysis confirmed direct binding of STAT5 to the HIF2A promoter 344 bp upstream of the HIF2A start site. STAT5 overexpression independently resulted in erythroid commitment in megakaryocytic-erythroid progenitors, which was abrogated by knockdown of GATA1. STAT5 is responsible for the immediate-early induction of the long isoform of the BCL2-related protein in erythroid cells through direct binding to the promoter of the BCLX gene.

Overview

Product Name	Anti-STAT5a Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-STAT5a Antibody catalog # PA1840. Tested in Flow Cytometry, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 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	Rabbit
Uniprot ID	P42229

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human STAT5a.
Predicted Reactive Species	Bovine
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
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	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat</p> <p>Flow Cytometry, 1-3ug/1x10⁶ cells, Human</p>

Anti-STAT5a Antibody (PA1840) Images

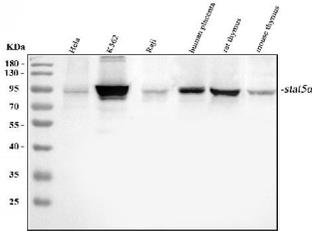


Figure 1. Western blot analysis of STAT5A using anti-STAT5A antibody (PA1840).

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 30 ug of sample under reducing conditions.

Lane 1: human HeLa whole cell lysates,
Lane 2: human K562 whole cell lysates,
Lane 3: human Raji whole cell lysates,
Lane 4: human placenta tissue lysates,
Lane 5: rat thymus tissue lysates,
Lane 6: mouse thymus tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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-STAT5A antigen affinity purified polyclonal antibody (Catalog # PA1840) 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 1:5000 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 STAT5A at approximately 95 kDa. The expected band size for STAT5A is at 91 kDa.

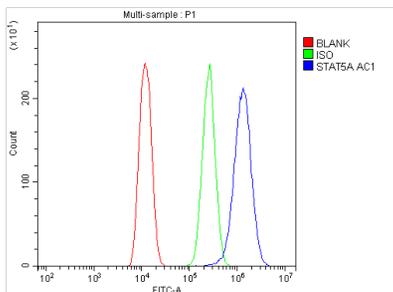


Figure 2. Flow Cytometry analysis of U20S cells using anti-STAT5A antibody (PA1840).

Overlay histogram showing U20S cells stained with PA1840 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-STAT5A Antibody (PA1840,1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

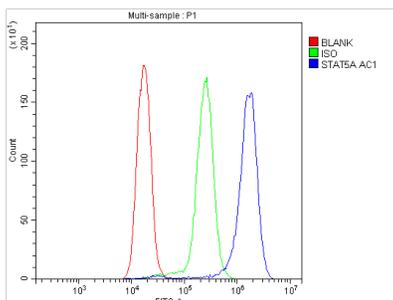


Figure 3. Flow Cytometry analysis of Jurkat cells using anti-STAT5A antibody (PA1840).

Overlay histogram showing Jurkat cells stained with PA1840 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-STAT5A Antibody (PA1840,1ug/1x10⁶ cells) for 30 min at 20°C. DyLight488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

1. PubMed ID: 33975196, Ocaranza P, Íñiguez G, Johnson MC, Cassorla F. Differential effects of androgens and estrogens over cellular GH sensitivity in HEPG2 cells. Growth Horm IGF Res. 2021 May 4;57-58:101390. doi:10.1016/j.ghir.2021.101390. Epub ahead of print. PMID:33975196.

2. PubMed ID: 23693134, Hu T, Zhang C, Tang Q, Su Y, Li B, Chen L, Zhang Z, Cai T, Zhu Y. Bmc Cancer. 2013 May 22;13:251. Doi: 10.1186/1471-2407-13-251. Variant G6Pd Levels Promote Tumor Cell Proliferation Or Apoptosis Via The Stat3/5 Pathway In The Human Melanoma Xenogr...

3. PubMed ID: 29393353, Hydrogen sulfide attenuates myocardial fibrosis in diabetic rats through the JAK/STAT signaling pathway

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