

## Anti-STAT1 Antibody Picoband™

Catalog Number: PB9510

### 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™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-STAT1 Antibody Picoband™ catalog # PB9510. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .
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	P42224

### Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human STAT1, different from the related mouse sequence by two amino acids.
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).
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>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat</p> <p>Western blot, 0.1-0.5ug/ml, Human, Rat</p>

## Anti-STAT1 Antibody Picoband™ (PB9510) Images

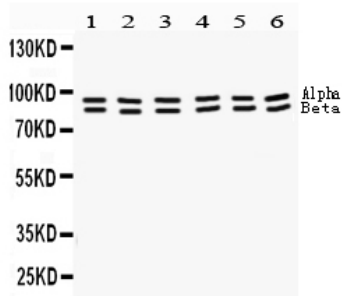


Figure 1. Western blot analysis of STAT1 using anti-STAT1 antibody (PB9510). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. Lane 1: Rat Testis Tissue Lysate at 50ug, Lane 2: Rat Brain Tissue Lysate at 50ug, Lane 3: Rat Liver Tissue Lysate at 50ug, Lane 4: Human Placenta Tissue Lysate at 50ug, Lane 5: MCF-7 Whole Cell Lysate at 40ug, Lane 6: SW620 Whole Cell Lysate at 40ug. 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-STAT1 antigen affinity purified polyclonal antibody (Catalog # PB9510) 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 STAT1 at approximately 91 kDa(Alpha), 84 kDa(Beta). The expected band size for STAT1 is at 87 kDa.

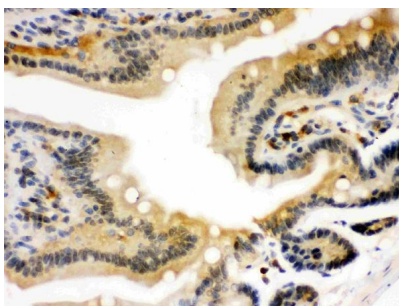


Figure 2. IHC analysis of STAT1 using anti-STAT1 antibody (PB9510). STAT1 was detected in a paraffin-embedded section of mouse intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-STAT1 Antibody (PB9510) 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.

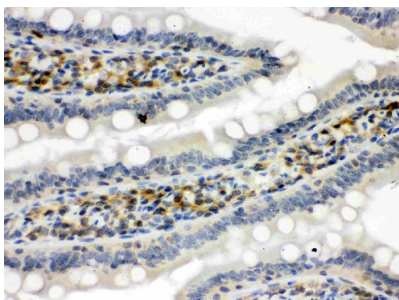
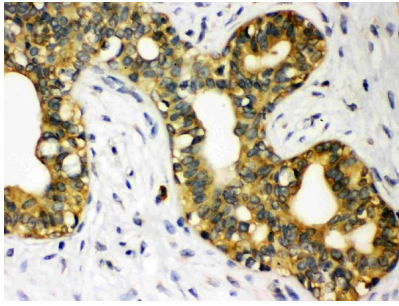


Figure 3. IHC analysis of STAT1 using anti-STAT1 antibody (PB9510). STAT1 was detected in a paraffin-embedded section of rat intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-STAT1 Antibody (PB9510) 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 STAT1 using anti-STAT1 antibody



(PB9510).  
STAT1 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-STAT1 Antibody (PB9510) 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.

## 7 Publications Citing This Product

1. PubMed ID: 10.1007/s00467-009-1163-4, Expression of JAKs/STATs pathway molecules in rat model of rapid focal segmental glomerulosclerosis
2. PubMed ID: , Death signal transduction induced by co-immobilized TNF-alpha plus IFN-gamma and the development of polymeric anti-cancer drugs
3. PubMed ID: 31731208, Gao Y,Gui F,Li D,Zhang R,Sun Q,Guo X.Fluoride regulates the expression of extracellular matrix HSPG and related signaling pathways FGFR3 and Ihh/PTHrP feedback loop during endochondral ossification.Environ Toxicol Pharmacol.2020 Jan;73:103275.doi:10.1016/

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