

Anti-STAT1 Picoband Antibody
Catalog # ABO12198**Specification****Anti-STAT1 Picoband Antibody - Product Information**

| | |
|-------------------|------------------------|
| Application | WB, IHC |
| Primary Accession | P42224 |
| Host | Rabbit |
| Reactivity | Human, Mouse, Rat |
| Clonality | Polyclonal |
| Format | Lyophilized |

Description

Rabbit IgG polyclonal antibody for Signal transducer and activator of transcription 1-alpha/beta (STAT1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-STAT1 Picoband Antibody - Additional Information

Gene ID 6772

Other Names

Signal transducer and activator of transcription 1-alpha/beta, Transcription factor ISGF-3 components p91/p84, STAT1

Calculated MW

87335 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Rat

Subcellular Localization

Cytoplasm . Nucleus . Translocated into the nucleus upon tyrosine phosphorylation and dimerization, in response to IFN-gamma and signaling by activated FGFR1, FGFR2, FGFR3 or FGFR4.

Protein Name

Signal transducer and activator of transcription 1-alpha/beta

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human STAT1 (114-143aa KILENAQRFNQAQSGNIQSTVMLDKQKELD), different from the related mouse sequence by two amino acids.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the transcription factor STAT family.

Anti-STAT1 Picoband Antibody - Protein Information**Name** STAT1**Function**

Signal transducer and transcription activator that mediates cellular responses to interferons (IFNs), cytokine KITLG/SCF and other cytokines and other growth factors (PubMed: [12764129](http://www.uniprot.org/citations/12764129), PubMed: [12855578](http://www.uniprot.org/citations/12855578), PubMed: [15322115](http://www.uniprot.org/citations/15322115), PubMed: [23940278](http://www.uniprot.org/citations/23940278), PubMed: [34508746](http://www.uniprot.org/citations/34508746), PubMed: [35568036](http://www.uniprot.org/citations/35568036), PubMed: [9724754](http://www.uniprot.org/citations/9724754)). Following type I IFN (IFN-alpha and IFN-beta) binding to cell surface receptors, signaling via protein kinases leads to activation of Jak kinases (TYK2 and JAK1) and to tyrosine phosphorylation of STAT1 and STAT2. The phosphorylated STATs dimerize and associate with ISGF3G/IRF-9 to form a complex termed ISGF3 transcription factor, that enters the nucleus (PubMed: [28753426](http://www.uniprot.org/citations/28753426), PubMed: [35568036](http://www.uniprot.org/citations/35568036)). ISGF3 binds to the IFN stimulated response element (ISRE) to activate the transcription of IFN-stimulated genes (ISG), which drive the cell in an antiviral state (PubMed: [28753426](http://www.uniprot.org/citations/28753426), PubMed: [35568036](http://www.uniprot.org/citations/35568036)). In response to type II IFN (IFN-gamma), STAT1 is tyrosine- and serine-phosphorylated (PubMed: [26479788](http://www.uniprot.org/citations/26479788)). It then forms a homodimer termed IFN-gamma-activated factor (GAF), migrates into the nucleus and binds to the IFN gamma activated sequence (GAS) to drive the expression of the target genes, inducing a cellular antiviral state (PubMed: [8156998](http://www.uniprot.org/citations/8156998)). Becomes activated in response to KITLG/SCF and KIT signaling (PubMed: [15526160](http://www.uniprot.org/citations/15526160)). May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4 (PubMed: [19088846](http://www.uniprot.org/citations/19088846)). Involved in food tolerance in small intestine: associates with the Gasdermin-D, p13 cleavage product (13 kDa GSDMD) and promotes transcription of CIITA, inducing type 1 regulatory T (Tr1) cells in upper small intestine (By similarity).

Cellular Location

Cytoplasm. Nucleus Note=Translocated into the nucleus upon tyrosine phosphorylation and dimerization, in response to IFN-gamma and signaling by activated FGFR1, FGFR2, FGFR3 or FGFR4 (PubMed:15322115). Monomethylation at Lys- 525 is required for phosphorylation at

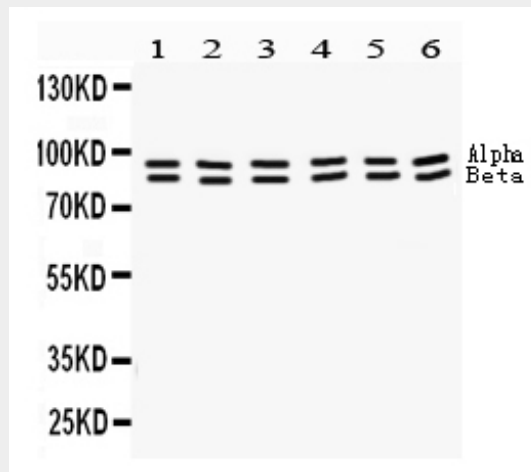
Tyr-701 and translocation into the nucleus (PubMed:28753426). Translocates into the nucleus in response to interferon-beta stimulation (PubMed:26479788)

Anti-STAT1 Picoband Antibody - Protocols

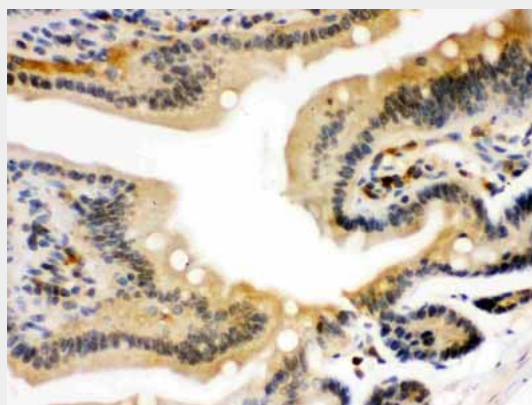
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

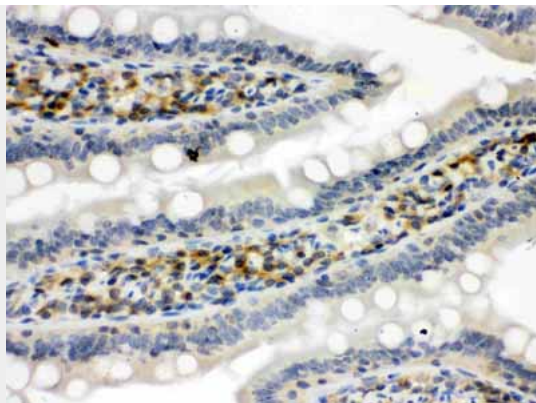
Anti-STAT1 Picoband Antibody - Images



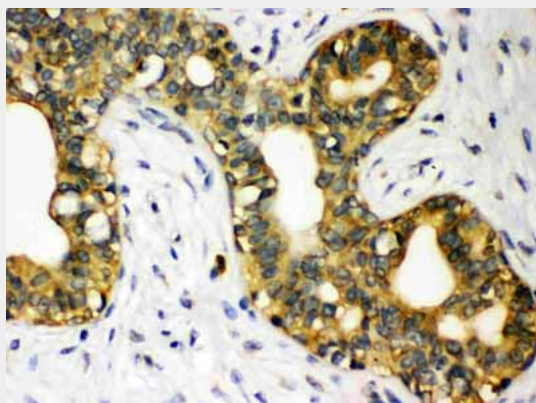
Anti- STAT1 Picoband antibody, ABO12198, Western blottingAll lanes: Anti STAT1 (ABO12198) at 0.5ug/mlLane 1: Rat Testis Tissue Lysate at 50ugLane 2: Rat Brain Tissue Lysate at 50ugLane 3: Rat Liver Tissue Lysate at 50ugLane 4: Human Placenta Tissue Lysate at 50ugLane 5: MCF-7 Whole Cell Lysate at 40ugLane 6: SW620 Whole Cell Lysate at 40ugPredicted bind size: 91KD(Alpha), 84KD(Beta)Observed bind size: 91KD(Alpha), 84KD(Beta)



Anti- STAT1 Picoband antibody, ABO12198, IHC(P)IHC(P): Mouse Intestine Tissue



Anti- STAT1 Picoband antibody, ABO12198, IHC(P)IHC(P): Rat Intestine Tissue



Anti- STAT1 Picoband antibody, ABO12198, IHC(P)IHC(P): Human Mammary Cancer Tissue

Anti-STAT1 Picoband Antibody - Background

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.