

## Anti-STAT1 alpha Rabbit Monoclonal Antibody Catalog # ABO14088

### Specification

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#### Anti-STAT1 alpha Rabbit Monoclonal Antibody - Product Information

Application	WB, IHC, IF, ICC, IP, FC
Primary Accession	<a href="#">P42224</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid

#### Description

Anti-STAT1 alpha Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human.

#### Anti-STAT1 alpha Rabbit Monoclonal 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

WB 1:5000-1:20000<br>IHC 1:50-1:200<br>ICC/IF 1:50-1:200<br>IP 1:50<br>FC 1:500

#### 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.

#### Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

#### Immunogen

A synthesized peptide derived from human STAT1 alpha

#### Purification

Affinity-chromatography

Storage

**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

## Anti-STAT1 alpha Rabbit Monoclonal 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:<a href="http://www.uniprot.org/citations/12764129" target="\_blank">12764129</a>, PubMed:<a href="http://www.uniprot.org/citations/12855578" target="\_blank">12855578</a>, PubMed:<a href="http://www.uniprot.org/citations/15322115" target="\_blank">15322115</a>, PubMed:<a href="http://www.uniprot.org/citations/23940278" target="\_blank">23940278</a>, PubMed:<a href="http://www.uniprot.org/citations/34508746" target="\_blank">34508746</a>, PubMed:<a href="http://www.uniprot.org/citations/35568036" target="\_blank">35568036</a>, PubMed:<a href="http://www.uniprot.org/citations/9724754" target="\_blank">9724754</a>). 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:<a href="http://www.uniprot.org/citations/28753426" target="\_blank">28753426</a>, PubMed:<a href="http://www.uniprot.org/citations/35568036" target="\_blank">35568036</a>). 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:<a href="http://www.uniprot.org/citations/28753426" target="\_blank">28753426</a>, PubMed:<a href="http://www.uniprot.org/citations/35568036" target="\_blank">35568036</a>). In response to type II IFN (IFN-gamma), STAT1 is tyrosine- and serine-phosphorylated (PubMed:<a href="http://www.uniprot.org/citations/26479788" target="\_blank">26479788</a>). 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:<a href="http://www.uniprot.org/citations/8156998" target="\_blank">8156998</a>). Becomes activated in response to KITLG/SCF and KIT signaling (PubMed:<a href="http://www.uniprot.org/citations/15526160" target="\_blank">15526160</a>). May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4 (PubMed:<a href="http://www.uniprot.org/citations/19088846" target="\_blank">19088846</a>). Following bacterial lipopolysaccharide (LPS)-induced TLR4 endocytosis, phosphorylated at Thr-749 by IKBKB which promotes binding of STAT1 to the 5'-TTTGAGGC-3' sequence in the ARID5A promoter, resulting in transcriptional activation of ARID5A and subsequent ARID5A-mediated stabilization of IL6 (PubMed:<a href="http://www.uniprot.org/citations/32209697" target="\_blank">32209697</a>). Phosphorylation at Thr-749 also promotes binding of STAT1 to the 5'-TTTGAGTC-3' sequence in the IL12B promoter and activation of IL12B transcription (PubMed:<a href="http://www.uniprot.org/citations/32209697" target="\_blank">32209697</a>). 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

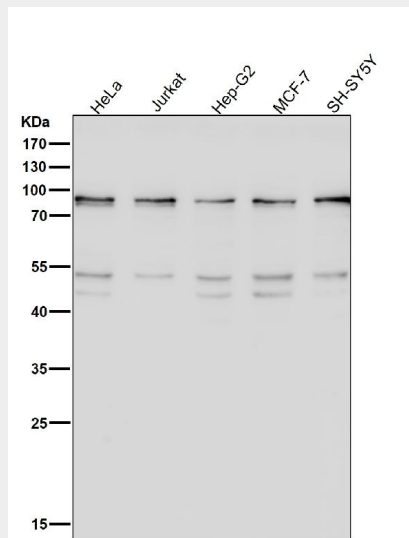
Cytoplasm. Nucleus Note=Translocated into the nucleus upon tyrosine phosphorylation and dimerization, in response to IFN-gamma and signaling by activated FGFR1, FGFR2, FGFR3 or FGFR4 (PubMed:15322115). Monomethylation at Lys- 525 is required for phosphorylation at Tyr-701 and translocation into the nucleus (PubMed:28753426). Translocates into the nucleus in response to interferon-beta stimulation (PubMed:26479788)

## Anti-STAT1 alpha Rabbit Monoclonal Antibody - Protocols

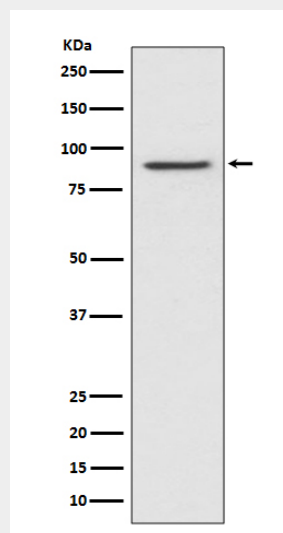
Provided below are standard protocols that you may find useful for product applications.

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

### Anti-STAT1 alpha Rabbit Monoclonal Antibody - Images



All lanes use the Antibody at 1:2K dilution for 1 hour at room temperature.



Western blot analysis of STAT1 alpha expression in HeLa cell lysate.