10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# STAT1 Antibody (aa694-743)

**Rabbit Polyclonal Antibody**

**Catalog # ALS14193**

## Specification

### STAT1 Antibody (aa694-743) - Product Information

| | |
|---|---|
| Application | **WB** |
| Primary Accession | P42224 |
| Reactivity | **Human, Mouse, Rat** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Calculated MW | **87kDa KDa** |

### STAT1 Antibody (aa694-743) - Additional Information

**Gene ID** 6772

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

**Target/Specificity**
STAT1 Antibody detects endogenous levels of total STAT1 protein.

**Reconstitution & Storage**
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

**Precautions**
STAT1 Antibody (aa694-743) is for research use only and not for use in diagnostic or therapeutic procedures.

### STAT1 Antibody (aa694-743) - 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/9724754" target="_blank">9724754</a>, PubMed:<a href="http://www.uniprot.org/citations/12855578" target="_blank">12855578</a>, PubMed:<a href="http://www.uniprot.org/citations/12764129" target="_blank">12764129</a>, PubMed:<a href="http://www.uniprot.org/citations/15322115" target="_blank">15322115</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/23940278" target="_blank">23940278</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>). 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)

**Volume**
50 µl

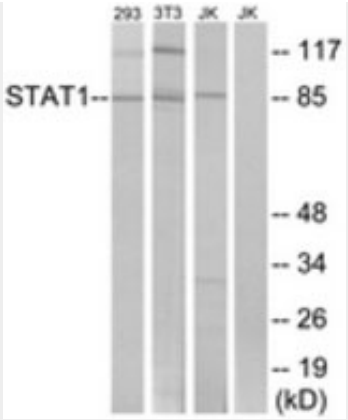
## STAT1 Antibody (aa694-743) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## STAT1 Antibody (aa694-743) - Images

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999




Western blot of extracts from 293/3T3/Jurkat, using STAT1 Antibody.

**STAT1 Antibody (aa694-743) - Background**

Signal transducer and transcription activator that mediates cellular responses to interferons (IFNs), cytokine KITLG/SCF and other cytokines and other growth factors. 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. 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. In response to type II IFN (IFN-gamma), STAT1 is tyrosine- and serine-phosphorylated. 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. Becomes activated in response to KITLG/SCF and KIT signaling. May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4.

**STAT1 Antibody (aa694-743) - References**

Schindler C.,et al.Proc. Natl. Acad. Sci. U.S.A. 89:7836-7839(1992).
Kristensen I.,et al.Submitted (NOV-2009) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Bechtel S.,et al.BMC Genomics 8:399-399(2007).
Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.