

Phospho-STAT1 (Y701) Antibody

Rabbit mAb Catalog # AP90916

Specification

Phospho-STAT1 (Y701) Antibody - Product Information

Application WB
Primary Accession P42224
Clonality Monoclonal

Other Names

CANDF7; ISGF 3; Signal transducer and activator of transcription 1; Stat1; STAT91; Transcription factor ISGF-3 components p91/p84;

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Isotype Rabbit IgG
Host Rabbit
Calculated MW 87335 Da

Phospho-STAT1 (Y701) Antibody - Additional Information

Purification Affinity-chromatography

Immunogen A synthesized peptide derived from human

STAT1

Description The Stat1 transcription factor is activated

in response to a large number of ligands and is essential for responsiveness to IFN- α and IFN- γ . Stat1 protein exists as a pair of isoforms, Stat1 α (91 kDa) and the splice variant Stat1 β (84 kDa). In most cells, both isoforms are activated by IFN- α , but only Stat1 α is activated by IFN- γ . The inappropriate activation of Stat1 occurs in

many tumors.

Storage Condition and Buffer Rabbit IgG in phosphate buffered saline,

pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid

freeze / thaw cycle.

Phospho-STAT1 (Y701) 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, PubMed:12855578, PubMed:15322115, PubMed:23940278, PubMed:<a



href="http://www.uniprot.org/citations/34508746" target=" blank">34508746, PubMed:35568036, PubMed: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, PubMed: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, PubMed:35568036). In response to type II IFN (IFN-gamma), STAT1 is tyrosine- and serine-phosphorylated (PubMed: 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). Becomes activated in response to KITLG/SCF and KIT signaling (PubMed:15526160). May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4 (PubMed: FGFR3 and FGFR4 (PubMed: responses to activated FGFR1, FGFR2, FGFR3 and FGFR4 (PubMed: responses to activated FGFR1, FGFR2, FGFR3 and FGFR4 (PubMed: responses to activated FGFR1, FGFR3 and FGFR4 (PubMed: responses to activated FGFR1, FGFR3 and FGFR4 (PubMed: responses to activated FGFR3.

IL6 (PubMed:32209697). 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:32209697). 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).

href="http://www.uniprot.org/citations/19088846" target="_blank">19088846). 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

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)

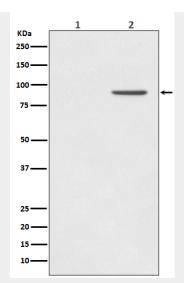
Phospho-STAT1 (Y701) Antibody - Protocols

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

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

Phospho-STAT1 (Y701) Antibody - Images





Western blot analysis of Phospho-STAT1 (Y701) expression in (1) A431 cell lysate; (2) A431 lysate cell treated with EGF.