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KD-Validated Anti-Phospho-STAT1 (S727) Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1409

Specification

KD-Validated Anti-Phospho-STAT1 (S727) Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P42224
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 87 kDa , observed, 87 kDa KDa**
Gene Name	**STAT1**
Aliases	**STAT1; Signal Transducer And Activator Of Transcription 1; Transcription Factor ISGF-3 Components P91/P84; STAT91; ISGF-3; Signal Transducer And Activator Of Transcription 1-Alpha/Beta; Signal Transducer And Activator Of Transcription 1, 91kDa; Signal Transducer And Activator Of Transcription 1, 91kD; CANDF7; IMD31A; IMD31B; IMD31C**
Immunogen	**A synthesized peptide derived from human Phospho-STAT1 (S727)**

KD-Validated Anti-Phospho-STAT1 (S727) 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

KD-Validated Anti-Phospho-STAT1 (S727) 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:12764129, PubMed:12855578, PubMed:15322115, PubMed:23940278, PubMed:34508746, PubMed:35568036, PubMed:<a

href="http://www.uniprot.org/citations/9724754" target="_blank">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: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 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).

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)

KD-Validated Anti-Phospho-STAT1 (S727) 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 Cytomety
- Cell Culture

KD-Validated Anti-Phospho-STAT1 (S727) Rabbit Monoclonal Antibody - Images

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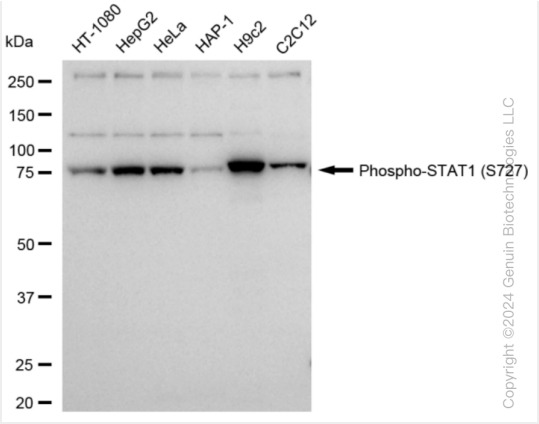
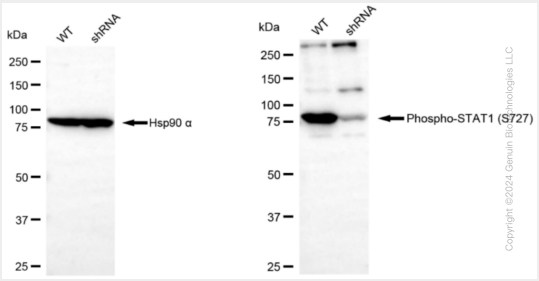
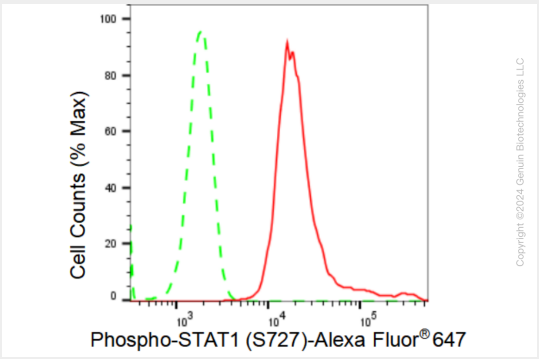


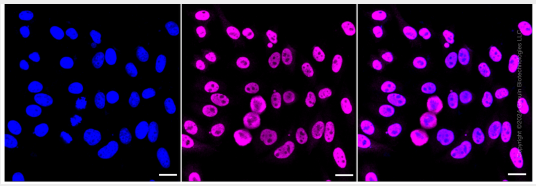
Western blotting analysis using anti-Phospho-STAT1 (S727) antibody (Cat#AGI1409). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Phospho-STAT1 (S727) antibody (Cat#AGI1409, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-Phospho-STAT1 (S727) antibody (Cat#AGI1409). Phospho-STAT1 (S727) expression in wild type (WT) and Phospho-STAT1 (S727) shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-Phospho-STAT1 (S727) antibody (Cat#AGI1409, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Phospho-STAT1 (S727) expression in HepG2 cells using Phospho-STAT1 (S727) antibody (Cat#AGI1409, 1:2,000). Green, isotype control; red, Phospho-STAT1 (S727).



Immunocytochemical staining of HepG2 cells with Phospho-STAT1 (S727) antibody

(Cat#AGI1409, 1:1,000). Nuclei were stained blue with DAPI; Phospho-STAT1 (S727) was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: High. Scale bar: 20 µm.