

## Product datasheet



# APC Anti-STAT1 (phospho S727) antibody [Stat1S727-C6] ab278721

Recombinant

[2 Images](#)

### Overview

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<b>Product name</b>	APC Anti-STAT1 (phospho S727) antibody [Stat1S727-C6]
<b>Description</b>	APC Rabbit monoclonal [Stat1S727-C6] to STAT1 (phospho S727)
<b>Host species</b>	Rabbit
<b>Conjugation</b>	APC. Ex: 645nm, Em: 660nm
<b>Tested applications</b>	<b>Suitable for:</b> Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	<p>Synthetic peptide within Human STAT1 (phospho S727). The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please <b>contact</b> our Scientific Support team to discuss your requirements.</p> <p>Database link: <a href="#">P42224</a></p> <p> <a href="#">Run BLAST with</a>  <a href="#">Run BLAST with</a></p>
<b>Positive control</b>	Flow cyt: U937 cells.
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"><li>- High batch-to-batch consistency and reproducibility</li><li>- Improved sensitivity and specificity</li><li>- Long-term security of supply</li><li>- Animal-free production</li></ul> <p>For more information <a href="#">see here</a>.</p>

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C. Store In the Dark.
<b>Storage buffer</b>	Preservative: 0.09% Sodium azide Constituents: 99.71% PBS, 0.2% BSA
<b>Purity</b>	Protein A/G purified
<b>Clonality</b>	Monoclonal

<b>Clone number</b>	Stat1S727-C6
<b>Isotype</b>	IgG
<b>Light chain type</b>	kappa

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab278721 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt		Use 5µl for 10 <sup>6</sup> cells.

## Target

**Function** Signal transducer and activator of transcription that mediates signaling by interferons (IFNs). Following type I IFN (IFN-alpha and IFN-beta) binding to cell surface receptors, Jak kinases (TYK2 and JAK1) are activated, leading to tyrosine phosphorylation of STAT1 and STAT2. The phosphorylated STATs dimerize, 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 interferon stimulated genes, 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.

**Involvement in disease** Note=STAT1 deficiency results in impaired immune response leading to severe mycobacterial and viral diseases. In the case of complete deficiency, patients can die of viral disease. Defects in STAT1 are a cause of mendelian susceptibility to mycobacterial disease (MSMD) [MIM:209950]; also known as familial disseminated atypical mycobacterial infection. This rare condition confers predisposition to illness caused by moderately virulent mycobacterial species, such as Bacillus Calmette-Guerin (BCG) vaccine and environmental non-tuberculous mycobacteria, and by the more virulent Mycobacterium tuberculosis. Other microorganisms rarely cause severe clinical disease in individuals with susceptibility to mycobacterial infections, with the exception of Salmonella which infects less than 50% of these individuals. The pathogenic mechanism underlying MSMD is the impairment of interferon-gamma mediated immunity whose severity determines the clinical outcome. Some patients die of overwhelming mycobacterial disease with lepromatous-like lesions in early childhood, whereas others develop, later in life, disseminated but curable infections with tuberculoid granulomas. MSMD is a genetically heterogeneous disease with autosomal recessive, autosomal dominant or X-linked inheritance.

**Sequence similarities** Belongs to the transcription factor STAT family.  
Contains 1 SH2 domain.

**Post-translational modifications** Phosphorylated on tyrosine and serine residues in response to IFN-alpha, IFN-gamma, PDGF and EGF. Phosphorylation on Tyr-701 (lacking in beta form) by JAK promotes dimerization and subsequent translocation to the nucleus. Phosphorylation on Ser-727 by several kinases including MAPK14, ERK1/2 and CAMKII on IFN-gamma stimulation, regulates STAT1 transcriptional activity. Phosphorylation on Ser-727 promotes sumoylation though increasing interaction with PIAS. Phosphorylation on Ser-727 by PKCdelta induces apoptosis in response to DNA-

damaging agents.

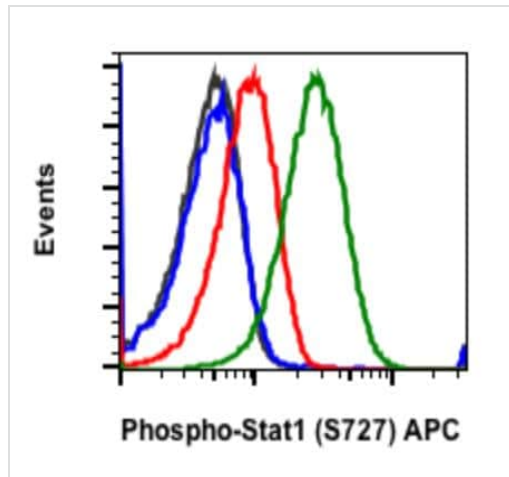
Sumoylated by SUMO1, SUMO2 and SUMO3. Sumoylation is enhanced by IFN-gamma-induced phosphorylation on Ser-727, and by interaction with PIAS proteins. Enhances the transactivation activity.

ISGylated.

### Cellular localization

Cytoplasm. Nucleus. Translocated into the nucleus in response to IFN-gamma-induced tyrosine phosphorylation and dimerization.

### Images



Flow cytometric analysis of U937 cells untreated (red) or treated with IFN $\alpha$ +IL4+PV (green) using ab278721, or concentration-matched Rabbit (G9) mAb IgG Isotype Control (APC Conjugate) for cells untreated (black) or treated with IFN $\alpha$ +IL4+PV (blue).

Flow Cytometry - APC Anti-STAT1 (phospho S727) antibody [Stat1S727-C6] (ab278721)

Why choose  $\alpha$  recombinant antibody?

- Research with confidence**  
Consistent and reproducible results
- Long-term and scalable supply**  
Recombinant technology
- Success from the first experiment**  
Confirmed specificity
- Ethical standards compliant**  
Animal-free production

APC Anti-STAT1 (phospho S727) antibody [Stat1S727-C6] (ab278721)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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