

# Anti-STAT1 alpha antibody [EPYR2154] - BSA and Azide free ab168333

敲除验证 重组 RabMAb

### 3 图像

#### 概述

产品名称	Anti-STAT1 alpha抗体[EPYR2154] - BSA and Azide free
描述	兔单克隆抗体[EPYR2154] to STAT1 alpha - BSA and Azide free
宿主	Rabbit
特异性	Based on Blast results using the immunogen sequence, this antibody should recognise the alpha but not the beta form (only 30% homology) of Stat1.
经测试应用	<b>适用于:</b> WB, IP <b>不适用于:</b> Flow Cyt
种属反应性	<b>与反应:</b> Mouse, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
常规说明	ab168333 is the carrier-free version of <a href="#">ab92506</a> .  Our <b>carrier-free</b> antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.  This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.  Use our <b>conjugation kits</b> for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.  This product is compatible with the Maxpar <sup>®</sup> Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar <sup>®</sup> is a trademark of Fluidigm Canada Inc.  This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information <a href="#">see here</a> .  Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit

monoclonal antibodies. For details on our patents, please refer to [RabMAb® patents](#).

Rat: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

## 性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C. Do Not Freeze.
存储溶液	Constituent: PBS
无载体	是
纯度	Protein A purified
克隆	单克隆
克隆编号	EPYR2154
同种型	IgG

## 应用

**The Abpromise guarantee**      **Abpromise™**承诺保证使用ab168333于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
WB		Use at an assay dependent concentration. Predicted molecular weight: 87 kDa.
IP		Use at an assay dependent concentration.

应用说明      Is unsuitable for Flow Cyt.

## 靶标

**功能**      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.

**疾病相关**      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.

#### 序列相似性

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

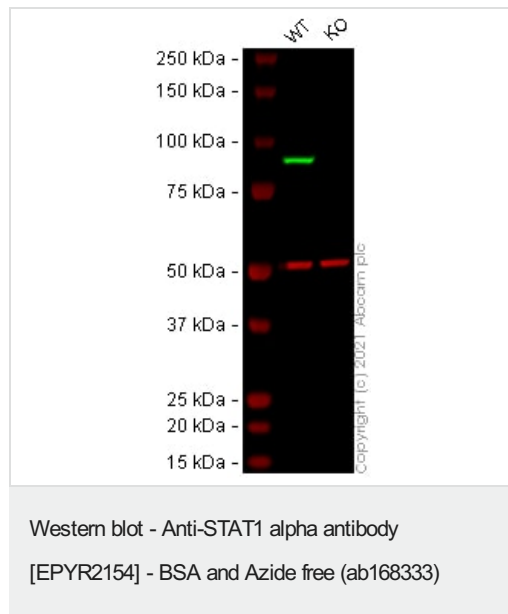
#### 翻译后修饰

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.

#### 细胞定位

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

#### 图片



**All lanes** : Anti-STAT1 alpha antibody [EPYR2154] ([ab92506](#)) at 1/1000 dilution

**Lane 1** : Wild-type HeLa cell lysate

**Lane 2** : STAT1 knockout HeLa cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Predicted band size:** 87 kDa

**Observed band size:** 85 kDa

This data was developed using the same antibody clone in a different buffer formulation ([ab92506](#)).

**Lanes 1 - 2:** Merged signal (red and green). Green - [ab92506](#)

observed at 85 kDa. Red - loading control **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) observed at 55 kDa.

**ab92506** was shown to react with STAT1 alpha in wild-type HeLa cells in Western blot with loss of signal observed in STAT1 knockout cell line **ab255346** (STAT1 knockout cell lysate **ab263837**). Wild-type HeLa and STAT1 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween<sup>®</sup>) before incubation with **ab92506** and **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) overnight at 4 °C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye<sup>®</sup> 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye<sup>®</sup> 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 h at room temperature before imaging.







Immunoprecipitation - Anti-STAT1 alpha antibody [EPYR2154] - BSA and Azide free (ab168333)

**ab92506** (purified) at 1/20 dilution (0.5ug) immunoprecipitating STAT1 alpha in A431 whole cell lysate. A431 (Human epidermoid carcinoma epithelial cell) whole cell lysate 10ug  
Lane 2 (+): **ab92506** & A431 whole cell lysate  
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of **ab92506** in A431 whole cell lysate  
For western blotting, VeriBlot for IP secondary antibody (HRP) (**ab131366**) was used at 1/2000 dilution.  
Blocking and diluting buffer: 5% NFDm/TBST.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab92506**).

### Why choose a recombinant antibody?

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

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

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