

### Anti-STAT3 antibody [EPR787Y] ab68153

敲除验证
重组
RabMAb

★★★★☆
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#### 概述

产品名称	Anti-STAT3抗体[EPR787Y]
描述	兔单克隆抗体[EPR787Y] to STAT3
宿主	Rabbit
经测试应用	<b>适用于:</b> Flow Cyt (Intra), ChIC/CUT&RUN-seq, ICC/IF, WB, IHC-P <b>不适用于:</b> IP
种属反应性	<b>与反应:</b> Mouse, Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	WB: Rat and mouse heart tissue lysates; Human, mouse, and rat brain tissue lysates; Rat kidney tissue lysate; HeLa, HAP1, A431, HaCaT, NIH/3T3, C2C12, and Raji cell lysates. IHC-P: Human brain tissue. ICC/IF: HeLa cells. Flow Cyt (intra): Raji cells. ChIC/CUT&RUN seq: HepG2 cell
常规说明	<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> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

#### 性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
存储溶液	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 0.05% BSA, 59% PBS
纯度	Protein A purified
克隆	单克隆
克隆编号	EPR787Y

同种型

IgG

应用

The Abpromise guarantee

Abpromise™承诺保证使用ab68153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
Flow Cyt (Intra)		1/30 - 1/50.
ChIC/CUT&RUN-seq		Use at an assay dependent concentration.
ICC/IF	★★★★★ (1)	1/200. <b>For unpurified use at 1/140.</b>
WB	★★★★★ (7)	1/1000 - 1/2000. Detects a band of approximately 75, 88 kDa (predicted molecular weight: 88 kDa).
IHC-P	★★★★★ (1)	1/200. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. <b>For unpurified use at 1/140.</b>

应用说明

Is unsuitable for IP.

靶标

功能

Signal transducer and transcription activator that mediates cellular responses to interleukins, KITLG/SCF, LEP and other growth factors. Once activated, recruits coactivators, such as NCOA1 or MED1, to the promoter region of the target gene (PubMed:17344214). May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4. Binds to the interleukin-6 (IL-6)-responsive elements identified in the promoters of various acute-phase protein genes. Activated by IL31 through IL31RA. Involved in cell cycle regulation by inducing the expression of key genes for the progression from G1 to S phase, such as CCND1 (PubMed:17344214). Mediates the effects of LEP on melanocortin production, body energy homeostasis and lactation (By similarity). May play an apoptotic role by transactivating BIRC5 expression under LEP activation (PubMed:18242580). Cytoplasmic STAT3 represses macroautophagy by inhibiting EIF2AK2/PKR activity.

组织特异性

Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas.

疾病相关

Hyperimmunoglobulin E recurrent infection syndrome, autosomal dominant  
Autoimmune disease, multisystem, infantile-onset

序列相似性

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

翻译后修饰

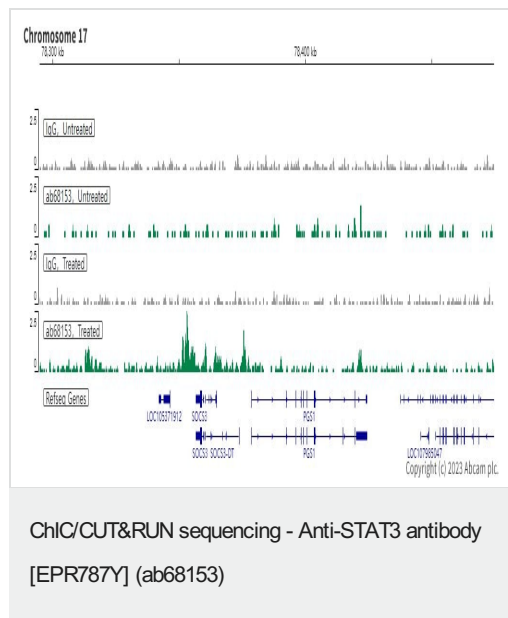
Tyrosine phosphorylated upon stimulation with EGF. Tyrosine phosphorylated in response to constitutively activated FGFR1, FGFR2, FGFR3 and FGFR4 (By similarity). Activated through tyrosine phosphorylation by BMX. Tyrosine phosphorylated in response to IL6, IL11, LIF, CNTF, KITLG/SCF, CSF1, EGF, PDGF, IFN-alpha, LEP and OSM. Activated KIT promotes phosphorylation on tyrosine residues and subsequent translocation to the nucleus. Phosphorylated on serine upon DNA damage, probably by ATM or ATR. Serine phosphorylation

is important for the formation of stable DNA-binding STAT3 homodimers and maximal transcriptional activity. ARL2BP may participate in keeping the phosphorylated state of STAT3 within the nucleus. Upon LPS challenge, phosphorylated within the nucleus by IRAK1. Upon erythropoietin treatment, phosphorylated on Ser-727 by RPS6KA5. Phosphorylation at Tyr-705 by PTK6 or FER leads to an increase of its transcriptional activity. Dephosphorylation on tyrosine residues by PTPN2 negatively regulates IL6/interleukin-6 signaling.

## 细胞定位

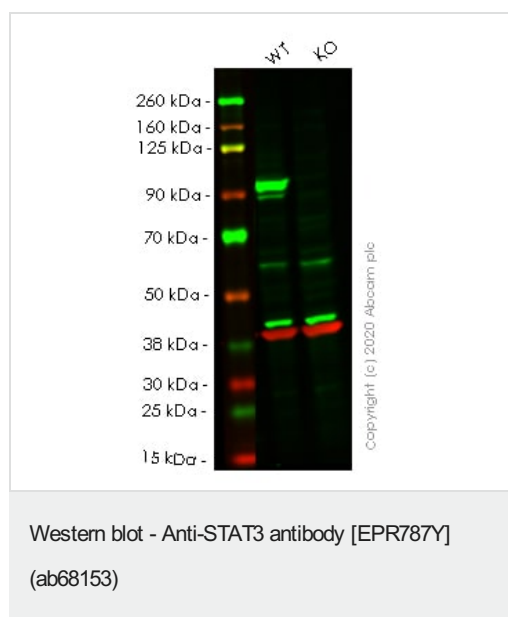
Cytoplasm. Nucleus. Shuttles between the nucleus and the cytoplasm. Translocated into the nucleus upon tyrosine phosphorylation and dimerization, in response to signaling by activated FGFR1, FGFR2, FGFR3 or FGFR4. Constitutive nuclear presence is independent of tyrosine phosphorylation. Predominantly present in the cytoplasm without stimuli. Upon leukemia inhibitory factor (LIF) stimulation, accumulates in the nucleus. The complex composed of BART and ARL2 plays an important role in the nuclear translocation and retention of STAT3. Identified in a complex with LYN and PAG1.

## 图片



ChIC/CUT&RUN was performed using a pAG-MNase at a final concentration of 700 ng/ $\mu$ L,  $2.5 \times 10^5$  HepG2 cells (starved overnight and treated with 100ng/ml IL-6 for 30min) and 5  $\mu$ g of ab68153 [EPR787Y]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads. The negative IgG control **ab172730** is also shown.

Additional screenshots of mapped reads can be downloaded [here](#). The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods.



**All lanes** : Anti-STAT3 antibody [EPR787Y] (ab68153) at 1/1000 dilution

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

**Lane 2** : STAT3 knockout HeLa cell lysate

Lysates/proteins at 20  $\mu$ g per lane.

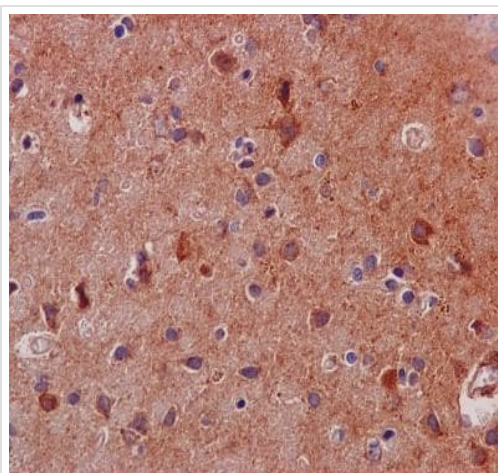
Performed under reducing conditions.

**Predicted band size:** 88 kDa

**Observed band size:** 92 kDa

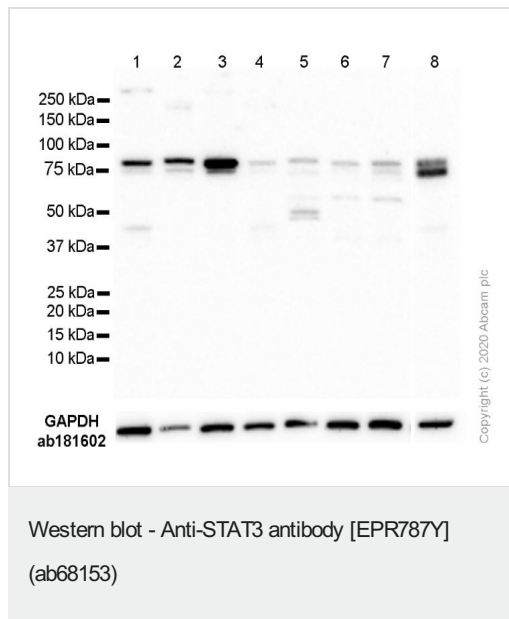
**Lanes 1- 2:** Merged signal (red and green). Green - ab68153 observed at 92 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) observed at 37 kDa.

ab68153 was shown to react with STAT3 in wild-type HeLa cells in western blot. Loss of signal was observed when knockout cell line [ab255436](#) (knockout cell lysate [ab263797](#)) was used. Wild-type HeLa and STAT3 knockout HeLa cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. ab68153 and Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT3 antibody [EPR787Y] (ab68153)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human brain tissue sections labelling STAT3 with purified ab68153 at 1/200. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody. Counterstained with Hematoxylin.



**All lanes :** Anti-STAT3 antibody [EPR787Y] (ab68153) at 1/1000 dilution

**Lane 1 :** HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate

**Lane 2 :** HaCaT (Human skin keratinocyte) whole cell lysate

**Lane 3 :** NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate

**Lane 4 :** C2C12 (Mouse myoblast cell line) whole cell lysate

**Lane 5 :** Human brain lysate

**Lane 6 :** Mouse brain lysate

**Lane 7 :** Rat brain lysate

**Lane 8 :** Rat kidney lysate

Lysates/proteins at 20 µg per lane.

## Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

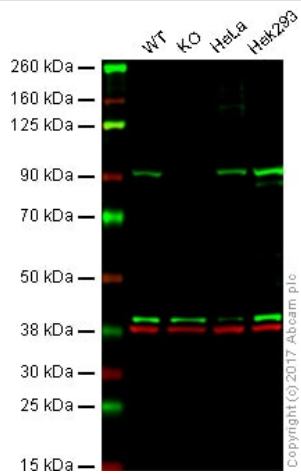
**Predicted band size:** 88 kDa

**Observed band size:** 92 kDa

**Exposure time:** 90 seconds

**Blocking/Diluting buffer:** 5% NFDM/TBST.

Rabbit monoclonal [EPR16891] to GAPDH ([ab181602](#)) used as loading control.



Western blot - Anti-STAT3 antibody [EPR787Y]  
(ab68153)

**All lanes :** Anti-STAT3 antibody [EPR787Y] (ab68153) at 1/500 dilution

**Lane 1 :** Wild-type HAP1 whole cell lysate

**Lane 2 :** STAT3 knockout HAP1 whole cell lysate

**Lane 3 :** HeLa whole cell lysate

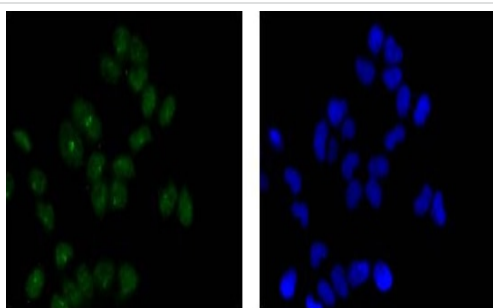
**Lane 4 :** HEK293 whole cell lysate

Lysates/proteins at 20 µg per lane.

**Predicted band size:** 88 kDa

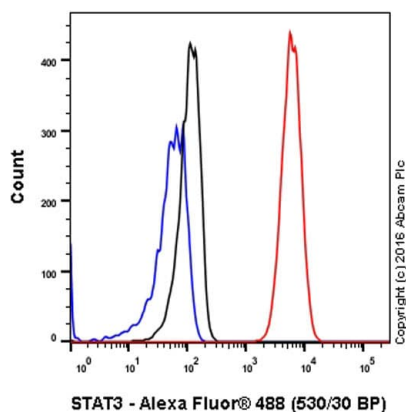
**Lanes 1 -4:** Merged signal (red and green). Green - ab68153 observed at 92 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

Ab68153 detected the expected band for STAT3 in wild-type cells along with additional cross-reactive bands. The band was not seen in STAT3 knockout HAP1 cells. Wild-type and STAT3 knockout samples were subjected to SDS-PAGE. Ab68153 and **ab8245** (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1/500 dilution and 1/10000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



Immunocytochemistry/ Immunofluorescence - Anti-  
STAT3 antibody [EPR787Y] (ab68153)

Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling STAT3 (green) with purified ab68153 at 1/200. Cells were fixed with 4% paraformaldehyde. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/200) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.



Flow Cytometry (Intracellular) - Anti-STAT3 antibody  
[EPR787Y] (ab68153)

ab68153 staining STAT3 in the human cell line HeLa (human cervix adenocarcinoma) by intracellular flow cytometry. Cells were fixed with 4% paraformaldehyde, permeabilized with 90% methanol and the sample was incubated with the primary antibody at a dilution of 1/30. A goat anti rabbit IgG (Alexa Fluor® 488) at a dilution of 1/2000 was used as the secondary antibody.

Isoytype control: Rabbit monoclonal IgG (Black)

Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue)

### Why choose a 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

Anti-STAT3 antibody [EPR787Y] (ab68153)

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