abcam

Product datasheet

# Anti-STAT3 (phospho S727) antibody [E121-31] - BSA and Azide free ab219593

重组 RabMAb

1 References 9 图像

## 概述

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|---|---|
| **产品名称** | Anti-STAT3 (phospho S727)抗体[E121-31] - BSA and Azide free |
| **描述** | 兔单克隆抗体[E121-31] to STAT3 (phospho S727) - BSA and Azide free |
| **宿主** | Rabbit |
| **经测试应用** | **适用于:** ICC/IF, WB, IHC-P, ChIC/CUT&RUN-seq, Dot blot |
| **种属反应性** | **与反应:** Mouse, Rat, Human<br>**预测可用于:** Horse, Cow, Macaque monkey |
| **免疫原** | Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. |
| **阳性对照** | WB: A431 cell lysate, C6 treated with epidermal growth factor. IP: HeLa cells ICC/IF: A431 cells IHC-P: human astrocytoma, rat cerebral cortex, mouse liver, and brain astrocytoma tissues ChIC/CUT&RUN seq: HepG2 cell |
| **常规说明** | ab219593 is the carrier-free version of **ab32143**.<br><br>Our **carrier-free** 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.<br><br>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.<br><br>Use our **conjugation kits** 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.<br><br>This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.<br><br>This product is a recombinant monoclonal antibody, which offers several advantages including:<br>- High batch-to-batch consistency and reproducibility<br>- Improved sensitivity and specificity<br>- Long-term security of supply<br>- Animal-free production<br>For more information **see here**. |

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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

## 性能

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| **形式** | Liquid |
| **存放说明** | Shipped at 4°C. Store at +4°C. Do Not Freeze. |
| **存储溶液** | pH: 7.20<br>Constituent: PBS |
| **无载体** | **是** |
| **纯度** | Protein A purified |
| **克隆** | 单克隆 |
| **克隆编号** | E121-31 |
| **同种型** | IgG |

## 应用

**The Abpromise guarantee** **Abpromise™承诺保证使用**ab219593**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 |
|---|---|---|
| **ICC/IF** | | Use at an assay dependent concentration. |
| **WB** | | Use at an assay dependent concentration. Detects a band of approximately 98 kDa (predicted molecular weight: 88 kDa). Stimulation may be required to allow detection of the phosphorylated protein. Please see images below for recommended treatment conditions and positive controls. |
| **IHC-P** | | Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**. |
| **ChIC/CUT&RUN-seq** | | Use at an assay dependent concentration. |
| **Dot blot** | | Use at an assay dependent concentration. |

## 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

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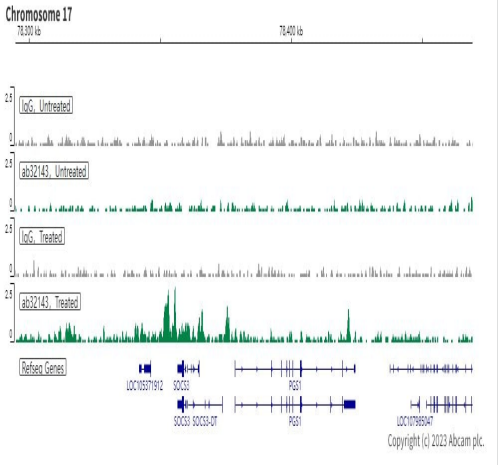
| | responses to activated FGFR1, FGFR2, FGFR3 and FGFR4. Binds to the interleukin-6 (IL-6)-responsive elements identified in the promoters of various acute-phase protein genes. Activated by IL31 through IL31RA. Involved in cell cycle regulation by inducing the expression of key genes for the progression 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 transctivating 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<br>Autoimmune disease, multisystem, infantile-onset |
| **序列相似性** | Belongs to the transcription factor STAT family.<br>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. |

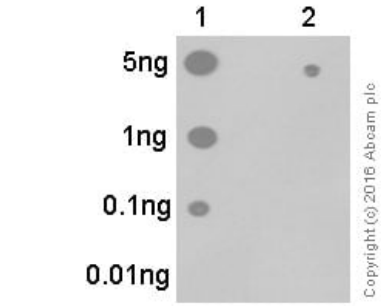
## 图片




ChIC/CUT&RUN sequencing - Anti-STAT3 (phospho S727) antibody [E121-31] - BSA and Azide free (ab219593)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32143**).

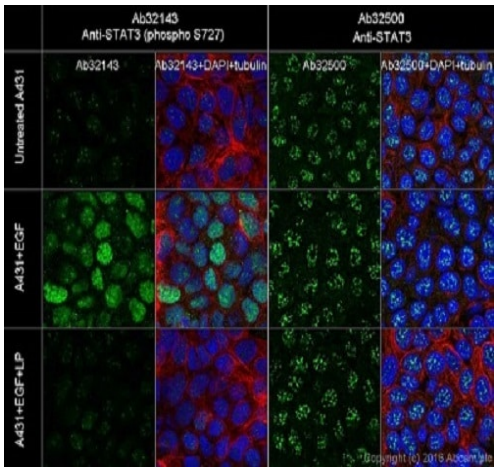
ChIC/CUT&RUN was performed using a pAG-MNAse at a final concentration of 700 ng/µL, 2.5 x 10^5 HepG2 cells (starved overnight and treated with 100ng/ml IL-6 for 30min) and 5 µg of **ab32143** [E121-31]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads. The negative 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.




Dot Blot - Anti-STAT3 (phospho S727) antibody [E121-31] - BSA and Azide free (ab219593)

Dot Blot analysis of Lane 1: STAT3 (pS727) phospho peptide and Lane 2: STAT3 non-phospho peptide labeling STAT3 (phospho S727) with **ab32143** at 1/1000 dilution (0.009 µg/ml). 5% NFDM /TBST was used as the diluting and blocking buffer and concentration. **ab97051**, Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated was used as the secondary antibody at 1/100,000 dilution. Exposure time: 10 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32143**).




Immunocytochemistry/ Immunofluorescence - Anti-STAT3 (phospho S727) antibody [E121-31] - BSA and Azide free (ab219593)

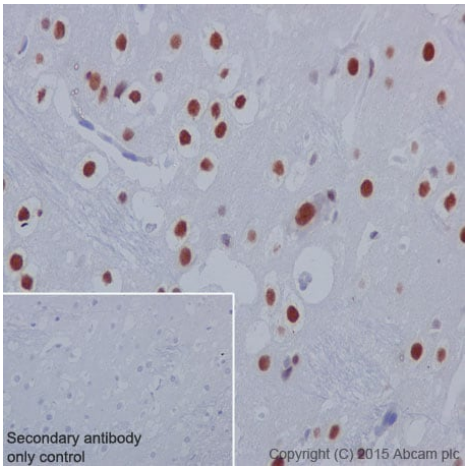
Immunocytochemical/Immunofluorescence analysis of untreated, EGF treated and EGF + LP treated A431 cells labelling STAT3 (phospho S727) with **ab32143** (left) and STAT3 with **ab32500** (right) both at a dilution of 1/500.

Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) (1/1000) was used as the secondary antibody (green). DAPI (blue) was used as the nuclear counterstain. Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (**ab195889**) (1/200) was used as a counterstain (red).

The green staining was increased and translocated from the cytoplasm into the nucleus in the EGF (**ab9697** 100ng/ml, 10min) treated A431 cells when compared with A431 cells without treatment. After LP treatment, the green signal was decreased. For the pan antibody, there was no great difference after EGF

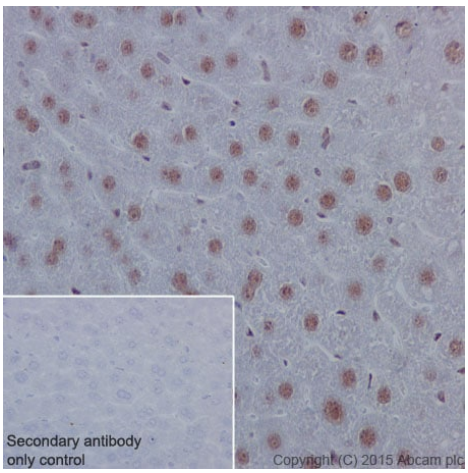
(100ng/ml, 10min) or EGF (100ng/ml, 10min) + LP treatment.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32143**).



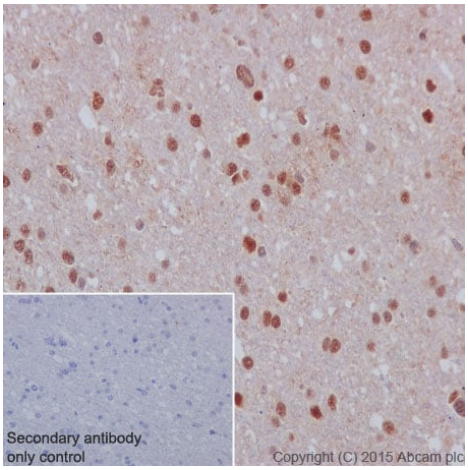

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT3 (phospho S727) antibody [E121-31] - BSA and Azide free (ab219593)

Immunohistochemical staining of paraffin embedded rat cerebral cortex with purified **ab32143** at a working dilution of 1/250. The secondary antibody used is HRP goat anti-rabbit IgG H&L (**ab97051**) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32143**).



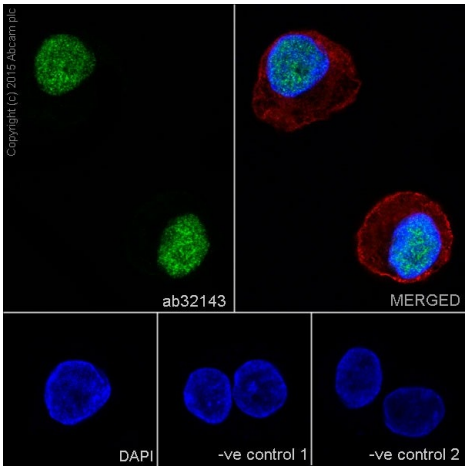

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT3 (phospho S727) antibody [E121-31] - BSA and Azide free (ab219593)

Immunohistochemical staining of paraffin embedded mouse liver with purified **ab32143** at a working dilution of 1/250. The secondary antibody used is HRP goat anti-rabbit IgG H&L (**ab97051**) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32143**).




Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT3 (phospho S727) antibody [E121-31] - BSA and Azide free (ab219593)

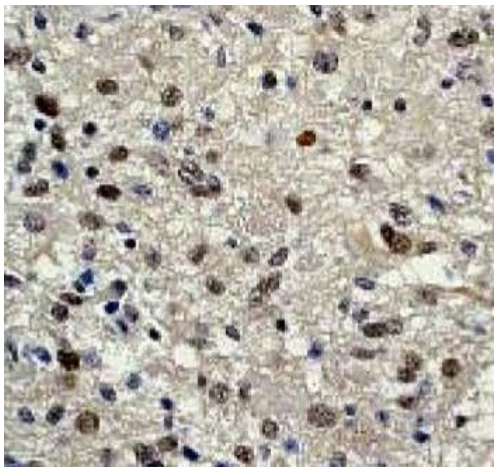
Immunohistochemical staining of paraffin embedded human astrocytoma with purified **ab32143** at a working dilution of 1/250. The secondary antibody used is HRP goat anti-rabbit IgG H&L (**ab97051**) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32143**).




Immunocytochemistry/ Immunofluorescence - Anti-STAT3 (phospho S727) antibody [E121-31] - BSA and Azide free (ab219593)

Purified **ab32143** staining STAT3 (phospho S727) in A431 cells by Immunocytochemistry/ Immunofluorescence. 4% PFA-fixed, 0.1% Triton X-100 permeabilized A431 (Human epidermoid carcinoma) cells labelled with **ab32143** at 1/500 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor 488) (**ab150077**) secondary antibody at 1/400 dilution (green). Confocal image showing nuclear staining on A431 cell line. The red staining is **ab7291** anti-Tubulin (mouse mAb), followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (**ab150120**) secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32143**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT3 (phospho S727) antibody [E121-31] - BSA and Azide free (ab219593)

IHC-P analysis of brain astrocytoma using unpurified **ab32143** at 1/50 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32143**).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.


Anti-STAT3 (phospho S727) antibody [E121-31] - BSA and Azide free (ab219593)



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