abcam

Product datasheet

Anti-STAT3 (phospho S727) antibody [E121-31] ab32143

重组 RabMAb

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概述

产品名称	Anti-STAT3 (phospho S727)抗体[E121-31]
描述	兔单克隆抗体[E121-31] to STAT3 (phospho S727)
宿主	Rabbit
特异性	This antibody detects Stat3 phosphorylated on Serine 727.
经测试应用	**适用于:** ICC/IF, WB, Dot blot, IHC-P
种属反应性	**与反应:** Rat, Human, Macaque monkey **预测可用于:** Horse, Cow
免疫原	Synthetic peptide (the amino acid sequence is considered to be commercially sensitive) corresponding to Human STAT3 aa 700 to the C-terminus. Database link: P40763
阳性对照	WB: A431 cell lysate.
常规说明	Mouse: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents **We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.** This product is a recombinant rabbit monoclonal antibody.

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: 7.20 Preservative: 0.01% Sodium azide

	Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
纯度	Protein A purified
克隆	单克隆
克隆编号	E121-31
同种型	IgG

应用

Our Abpromise guarantee covers the use of **ab32143** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

应用	Ab评论	说明
ICC/IF		1/500. **For unpurified, use 1/100.**
WB		1/1000 - 1/10000. Detects a band of approximately 98 kDa (predicted molecular weight: 88 kDa).
Dot blot		1/1000.
IHC-P	★★★★★	1/250. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See IHC antigen retrieval protocols. **For unpurified, use 1/50.**

靶标

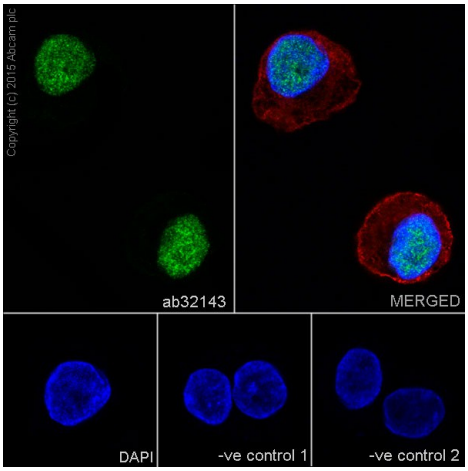
功能	Signal transducer and transcription activator that mediates cellular responses to interleukins, KITLG/SCF, LEP and other growth factors. Once activated, recruits coactivators, such as NCOA1 or MED1, to the promoter region of the target gene (PubMed:17344214). May mediate cellular responses to activated 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 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 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

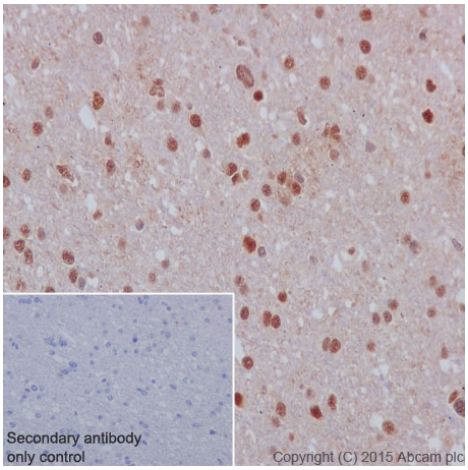
Cytoplasm. Nucleus. Shuttles between the nucleus and the cytoplasm. Translocated into the nucleus upon tyrosine phosphorylation and dimerization, in response to signaling by activated FGFR1, FGFR2, FGFR3 or FGFR4. Constitutive nuclear presence is independent of tyrosine phosphorylation. Predominantly 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



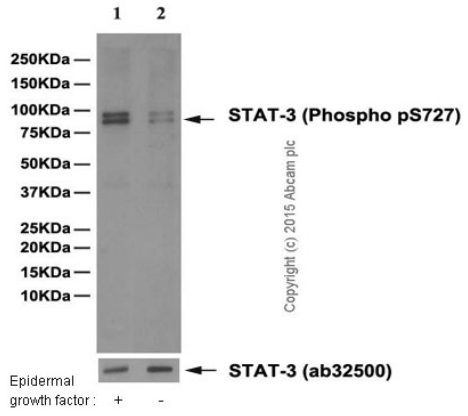
Immunocytochemistry/ Immunofluorescence - Anti-STAT3 (phospho S727) antibody [E121-31] (ab32143)

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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT3 (phospho S727) antibody [E121-31] (ab32143)

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.



Western blot - Anti-STAT3 (phospho S727) antibody [E121-31] (ab32143)

All lanes : Anti-STAT3 (phospho S727) antibody [E121-31] (ab32143) at 1/5000 dilution (purified)

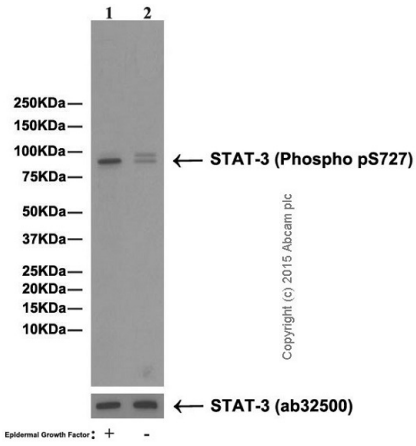
Lane 1 : C6 treated with epidermal growth factor
Lane 2 : untreated C6 whole cell lysates

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : HRP goat anti-rabbit IgG (H+L) at 1/50000 dilution

Predicted band size: 88 kDa
Observed band size: 98 kDa
why is the actual band size different from the predicted?

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST



Western blot - Anti-STAT3 (phospho S727) antibody [E121-31] (ab32143)

All lanes : purified

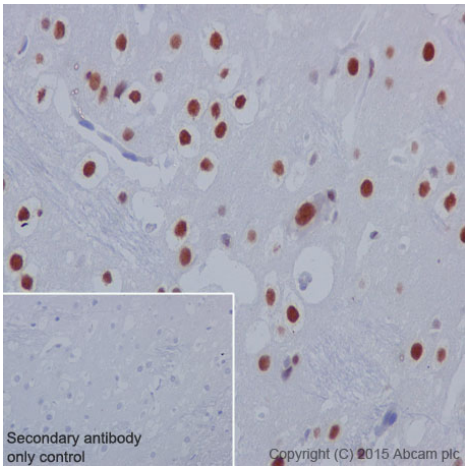
Lane 1 : A431 treated with epidermal growth factor
Lane 2 : untreated A431 cell lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : HRP goat anti-rabbit IgG (H+L) at 1/50000 dilution

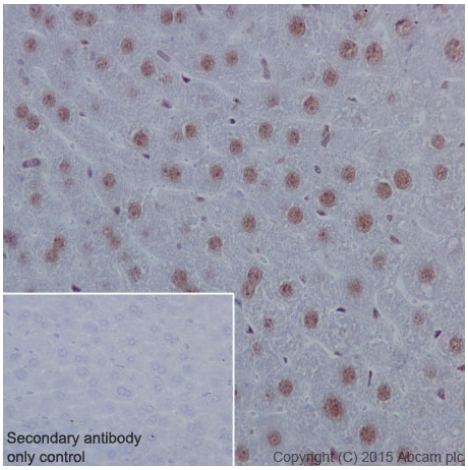
Predicted band size: 88 kDa
Observed band size: 98 kDa why is the actual band size different from the predicted?

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST



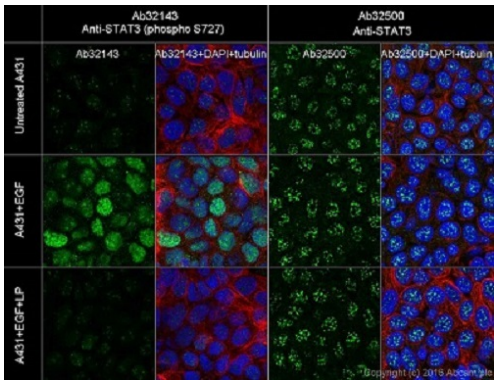
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT3 (phospho S727) antibody [E121-31] (ab32143)

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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT3 (phospho S727) antibody [E121-31] (ab32143)

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.

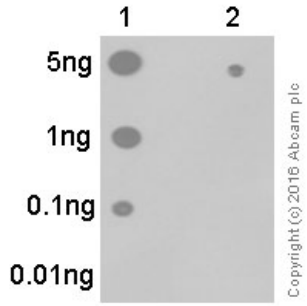


Immunocytochemistry/ Immunofluorescence - Anti-STAT3 (phospho S727) antibody [E121-31] (ab32143)

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.

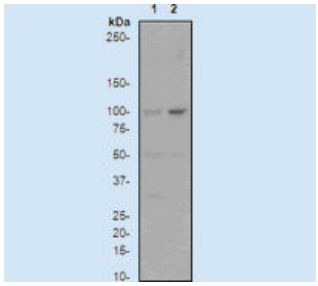
Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) (1/1000) was used as the secondary antibody (green). DAPI (blue) was used as the nuclear counterstain. Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa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



Dot Blot - Anti-STAT3 (phospho S727) antibody [E121-31] (ab32143)

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.

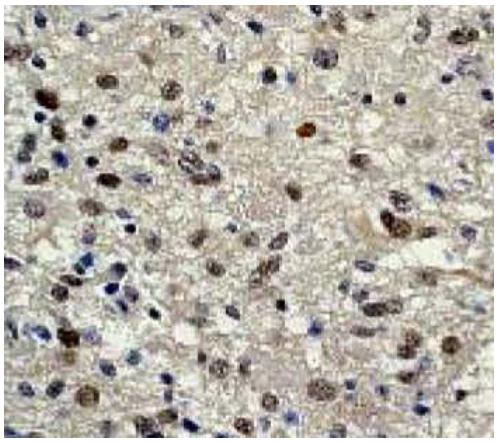


Western blot - Anti-STAT3 (phospho S727) antibody [E121-31] (ab32143)

All lanes : Anti-STAT3 (phospho S727) antibody [E121-31] (ab32143) at 1/1000 dilution (unpurified)

Lane 1 : A431 cell lysate
Lane 2 : A431 + EGF cell lysate

Predicted band size: 88 kDa
Observed band size: 98 kDa why is the actual band size different from the predicted?



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT3 (phospho S727) antibody [E121-31] (ab32143)

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

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