abcam

Product datasheet

Anti-STAT3 antibody [E121-21] ab32500

敲除验证 重组 RabMAb

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概述

产品名称	Anti-STAT3抗体[E121-21]
描述	兔单克隆抗体[E121-21] to STAT3
宿主	Rabbit
特异性	This antibody only detects Stat3 without phosphorylation on Serine 727. It does not detect S727-phosphorylated Stat3.
经测试应用	**适用于:** WB, ICC/IF, IP, Flow Cyt (Intra) **不适用于:** IHC-P
种属反应性	**与反应:** Human **预测可用于:** Horse, Cow
免疫原	Synthetic peptide corresponding to Human STAT3. A synthetic peptide corresponding to residues surrounding Ser727 of human Stat3.
阳性对照	HAP1, A431 cell lysate ICC/IF: HeLa cells Flow Cyt (intra): HeLa cells. IP: HeLa cells.
常规说明	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 **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, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
存储溶液	pH: 7.20 Preservative: 0.01% Sodium azide

	Constituents: 49% PBS, 50% Glycerol (glycerin, glycerine), 0.05% BSA
纯度	Protein A purified
克隆	单克隆
克隆编号	E121-21
同种型	IgG

应用

The Abpromise guarantee Abpromise™承诺保证使用ab32500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		1/1000. Detects a band of approximately 92 kDa (predicted molecular weight: 88 kDa).
ICC/IF	★☆☆☆☆ (2)	1/50. For unpurified use at 1/250 dilution
IP		1/20.
Flow Cyt (Intra)		1/20. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. For unpurified use at 1/100 dilution

应用说明 Is unsuitable for IHC-P.

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.

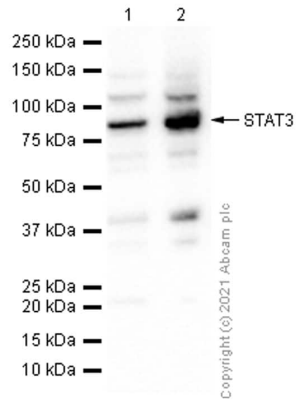
翻译后修饰 Tyrosine phosphorylated upon stimulation with EGF. Tyrosine phosphorylated in response to constitutively activated FGFR1, FGFR2, FGFR3 and FGFR4 (By similarity). Activated through

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



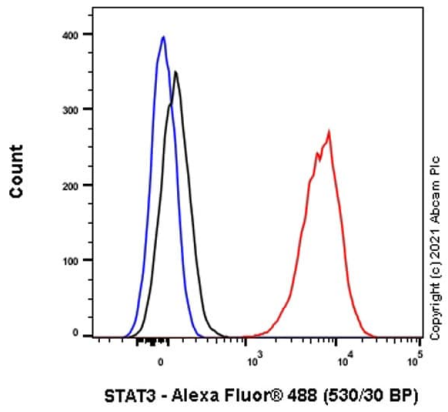
Western blot - Anti-STAT3 antibody [E121-21] (ab32500)

All lanes : Anti-STAT3 antibody [E121-21] (ab32500) at 1/1000 dilution (Purified)

Lane 1 : A431 (Human epidermoid carcinoma epithelial cell) whole cell lysate
Lane 2 : HaCaT (Human skin keratinocyte) whole cell lysate

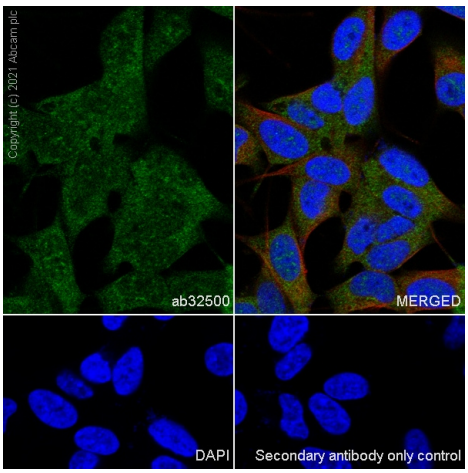
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 88 kDa



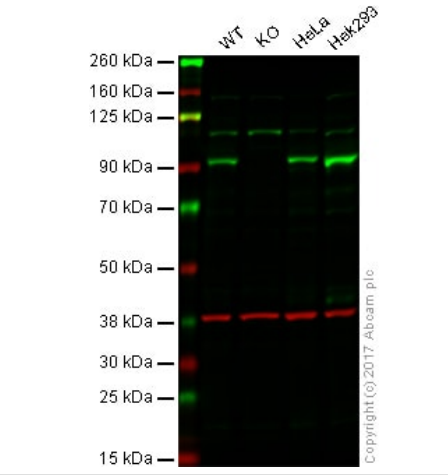
Flow Cytometry (Intracellular) - Anti-STAT3 antibody [E121-21] (ab32500)

Flow Cytometry analysis of A431 (Human epidermoid carcinoma epithelial cell) cells labelling STAT3 with Purified ab32500 at 1:20 dilution (5 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150081**) secondary antibody was used at 1:2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-STAT3 antibody [E121-21] (ab32500)

Immunocytochemistry analysis of SH-SY5Y (Human neuroblastoma epithelial cell) cells labeling STAT3 with Purified ab32500 at 1:50 dilution (2.1 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



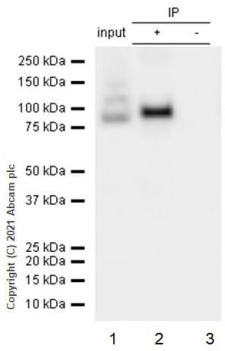
Western blot - Anti-STAT3 antibody [E121-21] (ab32500)

Lane 1: Wild type HAP1 whole cell lysate (20 µg)
Lane 2: STAT3 knockout HAP1 whole cell lysate (20 µg)
Lane 3: HeLa whole cell lysate (20 µg)
Lane 4: HEK293 whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab32500 observed at 92 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

Ab32500 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. Ab32500 and **ab8245**

(Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1/1000 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.



Immunoprecipitation - Anti-STAT3 antibody [E121-21] (ab32500)

ab32500 at 1/20 dilution (0.5 µg) immunoprecipitating STAT3 in HeLa whole cell lysate.

Lane 1 (input): HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg
Lane 2 (+): ab32500 & HeLa whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab32500 in HeLa whole cell lysate

For western blotting, ab32500 at 1/1000 and VeriBlot for IP secondary antibody (HRP) (**ab131366**) was used at 1/5000 dilution.

Blocking and diluting buffer: 5% NFDM /TBST.

Anti-STAT3 antibody [E121-21] (ab32500)

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