abcam

Product datasheet

Anti-STAT3 (phospho S727) antibody ab30647

★★★★★ 3 Abreviews 66 References 5 Images

Overview

Product name	Anti-STAT3 (phospho S727) antibody
Description	Rabbit polyclonal to STAT3 (phospho S727)
Host species	Rabbit
Tested applications	**Suitable for:** IP, ELISA, IHC-P, IHC-FoFr, WB
Species reactivity	**Reacts with:** Mouse, Rat, Dog, Human, African green monkey
Immunogen	Synthetic peptide corresponding to Human STAT3 (phospho S727). The antiserum was produced against synthesized phosphopeptide derived from human STAT3 around the phosphorylation site of serine 727 (P-M-SP-P-R). Database link: **P40763** (Peptide available as **ab43618**, **ab82053**)
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 49% PBS, 50% Glycerol, 0.87% Sodium chloride PBS without Mg2+ and Ca2+
Purity	Protein A purified
Purification notes	ab30647 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.

Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab30647 in the following tested applications.

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

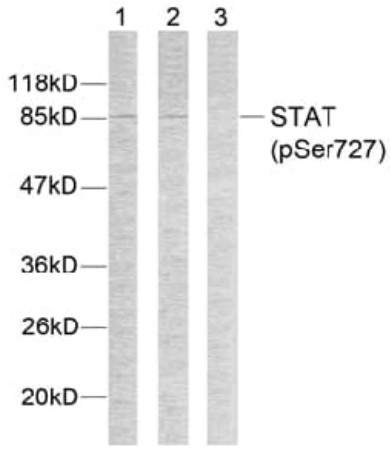
Application	Abreviews	Notes
IP		Use at an assay dependent concentration.
ELISA		Use at an assay dependent concentration.
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval via the pressure cooker method before commencing with IHC staining protocol.
IHC-FoFr	★★★★★ (1)	Use at an assay dependent concentration. PubMed: 20950279
WB	★★★★☆ (1)	1/500 - 1/1000. Detects a band of approximately 88 kDa (predicted molecular weight: 88 kDa).Can be blocked with **Recombinant Human STAT3 protein (ab43618)**.

Target

Function	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.
Tissue specificity	Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas.
Involvement in disease	Hyperimmunoglobulin E recurrent infection syndrome, autosomal dominant Autoimmune disease, multisystem, infantile-onset
Sequence similarities	Belongs to the transcription factor STAT family. Contains 1 SH2 domain.
Post-translational modifications	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.
Cellular localization	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.

Images

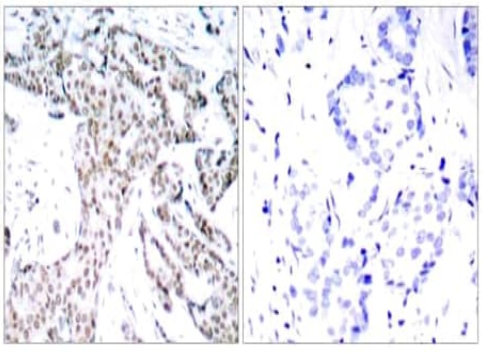


Western blot - Anti-STAT3 (phospho S727) antibody (ab30647)

All lanes : Anti-STAT3 (phospho S727) antibody (ab30647)

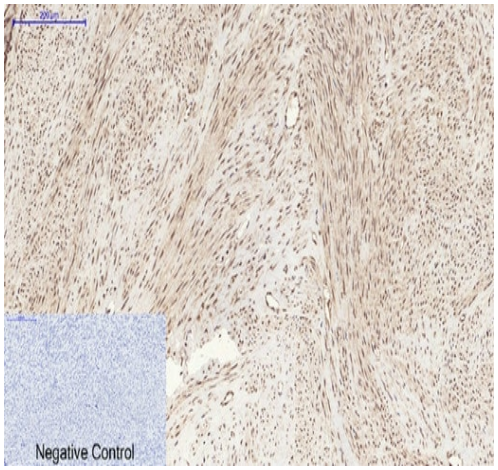
Lane 1 : HeLa cells extract
Lane 2 : HeLa cells extract with Synthesized non-phosphopeptide
Lane 3 : HeLa cells extract with Synthesized phosphopeptide

Predicted band size: 88 kDa
Observed band size: 88 kDa



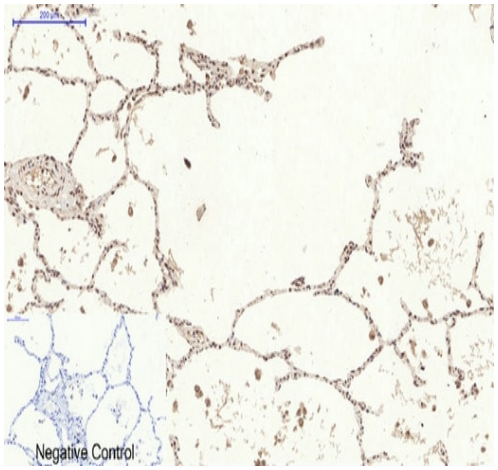
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT3 (phospho S727) antibody (ab30647)

ab30647 at 1/50 dilution staining STAT3 (phospho S727) in human breast carcinoma tissue by Immunohistochemistry (Formalin/PFA fixed paraffin embedded sections). The left image show staining by **ab30647** without specific peptide while right image show staining after blocking with peptide.



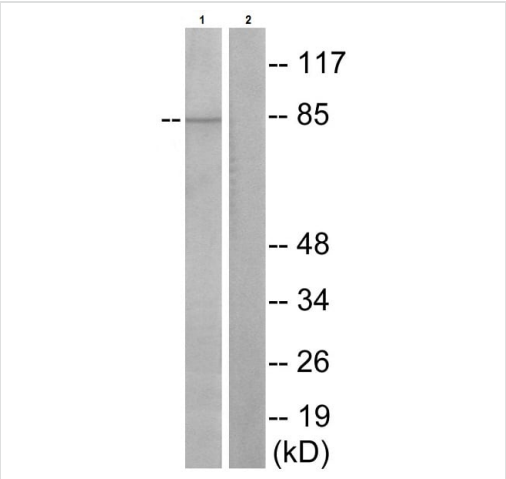
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT3 (phospho S727) antibody (ab30647)

Immunohistochemical analysis of human uterus tissue stained with ab30647 at 1/200 dilution at 4^{o}C overnight. The negative control is stained with secondary antibody only.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STAT3 (phospho S727) antibody (ab30647)

Immunohistochemical analysis of human lung tissue stained with ab30647 at 1/200 dilution at 4^{o}C overnight. The negative control is stained with secondary antibody only.



Western blot - Anti-STAT3 (phospho S727) antibody (ab30647)

All lanes : Anti-STAT3 (phospho S727) antibody (ab30647) at 1/500 dilution

Lane 1 : COS7 cell lysate

Lane 2 : COS7 cell lysate with phospho peptide

Predicted band size: 88 kDa

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

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