



Rabbit Anti-phospho-STAT3 (Ser727) antibody

SL3429R

Product Name:	phospho-STAT3 (Ser727)
Chinese Name:	磷酸化Signal transduction和转录激活因子3抗体
Alias:	STAT3 (phospho S727); p-STAT3 (phospho S727); STAT3(Phospho Ser727); STAT3(Phospho S727); p-STAT3(Ser727); Acute Phase Response Factor; APRF; DNA binding protein APRF; Signal Transducer and Activator of Transcription 3; STAT 3; STAT3 HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Rabbit,Sheep,Guinea Pig,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=0.2 μ g /TestIF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	88kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised phosphopeptide derived from human STAT3 around the phosphorylation site of Ser727:PM(p-S)PR
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	The protein encoded by this gene is a member of the STAT protein family. In response to cytokines and growth factors, STAT family members are phosphorylated by the

receptor associated kinases, and then form homo- or heterodimers that translocate to the cell nucleus where they act as transcription activators. This protein is activated through phosphorylation in response to various cytokines and growth factors including IFNs, EGF, IL5, IL6, HGF, LIF and BMP2. This protein mediates the expression of a variety of genes in response to cell stimuli, and thus plays a key role in many cellular processes such as cell growth and apoptosis. The small GTPase Rac1 has been shown to bind and regulate the activity of this protein. PIAS3 protein is a specific inhibitor of this protein. Mutations in this gene are associated with infantile-onset multisystem autoimmune disease and hyper-immunoglobulin E syndrome. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Sep 2015]

Function:

Signal transducer and transcription activator that mediates cellular responses to interleukins, KITLG/SCF and other growth factors. 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. Cytoplasmic STAT3 represses macroautophagy by inhibiting EIF2AK2/PKR activity. Plays an important role in host defense in methicillin-resistant S.aureus lung infection by regulating the expression of the antimicrobial lectin REG3G (By similarity).

Subunit:

Forms a homodimer or a heterodimer with a related family member (at least STAT1). Interacts with IL31RA, NCOA1, PELP1, SIPAR, SOCS7, STATIP1 and TMF1. Interacts with HCV core protein. Interacts with IL23R in presence of IL23. Interacts (via SH2 domain) with NLK. Interacts with ARL2BP; the interaction is enhanced by LIF and JAK1 expression (By similarity). Interacts with KPNA4 and KPNA5; KPNA4 may be the primary mediator of nuclear import (By similarity). Interacts with CAV2; the interaction is increased on insulin-induced tyrosine phosphorylation of CAV2 and leads to STAT3 activation (By similarity). Interacts with ARL2BP; interaction is enhanced with ARL2. Interacts with NEK6 (By similarity). Binds to CDK9 when activated and nuclear. Interacts with BMX. Interacts with ZIPK/DAPK3. Interacts with PIAS3; the interaction occurs on stimulation by IL6, CNTF or OSM and inhibits the DNA binding activity of STAT3. In prostate cancer cells, interacts with STAT3 and promotes DNA binding activity of STAT3. Interacts with STMN3, antagonizing its microtubule-destabilizing activity. Interacts with the 'Lys-129' acetylated form of BIRC5/survivin. Interacts with FER. Interacts (via SH2 domain) with EIF2AK2/PKR (via the kinase catalytic domain).

Subcellular Location:

Cytoplasm. Nucleus. Note=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.

Tissue Specificity:

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

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 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.

DISEASE:

Hyperimmunoglobulin E recurrent infection syndrome, autosomal dominant (AD-HIES) [MIM:147060]: A rare disorder of immunity and connective tissue characterized by immunodeficiency, chronic eczema, recurrent Staphylococcal infections, increased serum IgE, eosinophilia, distinctive coarse facial appearance, abnormal dentition, hyperextensibility of the joints, and bone fractures. Note=The disease is caused by mutations affecting the gene represented in this entry.

Similarity:

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

SWISS:

P40763

Gene ID:

6774

Database links:

[Entrez Gene: 6774](#)Human

[Entrez Gene: 20848](#)Mouse

[Entrez Gene: 25125](#)Rat

[Omim: 102582](#)Human

[SwissProt: P40763](#)Human

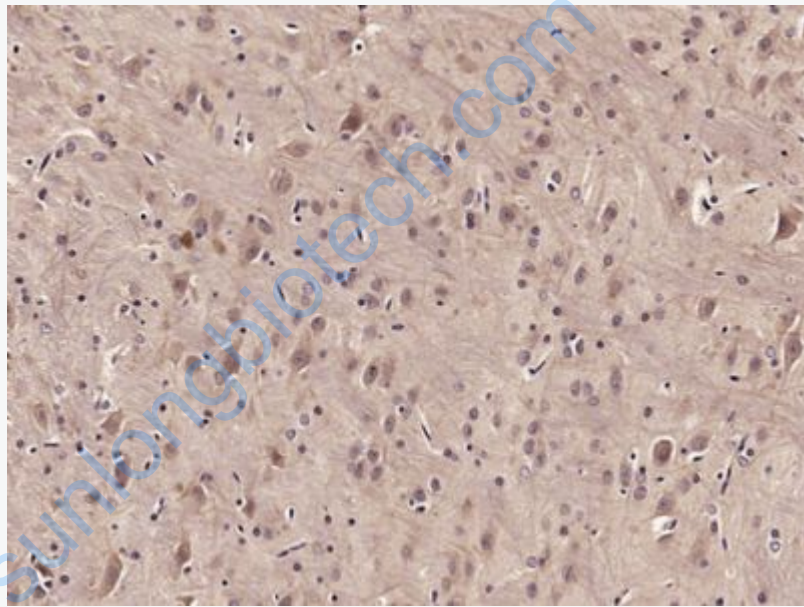
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[SwissProt: P52631](#)Rat

[Unigene: 463059](#)Human

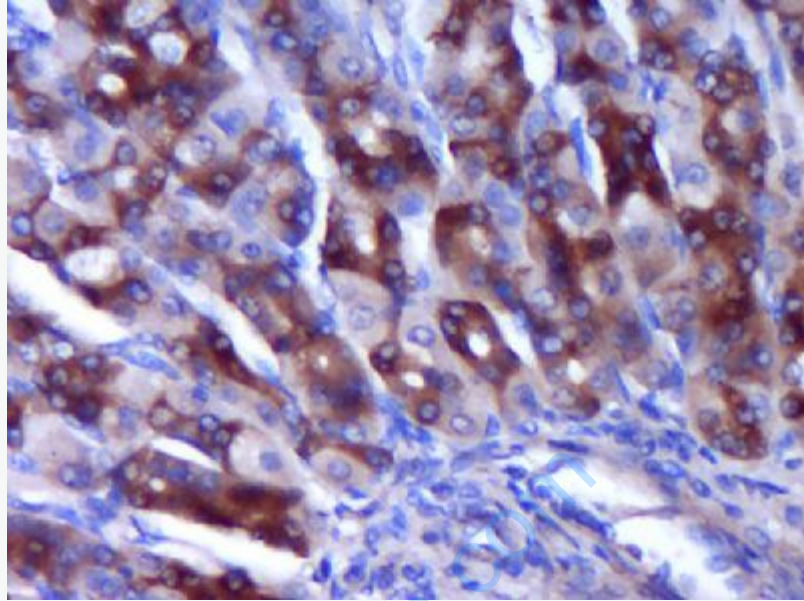
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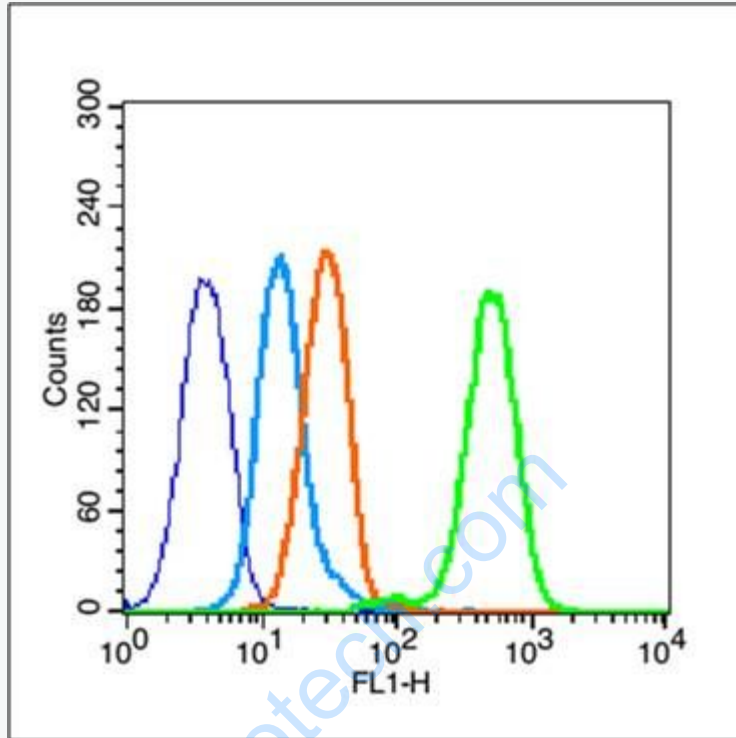


Picture:

Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by microwave in sodium citrate buffer (pH6.0) ; Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes; Blocking buffer (3% BSA) at RT for 30min; Antibody incubation with (phospho-STAT3 (Ser727)) Polyclonal Antibody, Unconjugated (SL3429R) at 1:400 overnight at 4°C, followed by conjugation to the secondary antibody (labeled with HRP)and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Rat stomach); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (p-STAT3 (Ser727)) Polyclonal Antibody, Unconjugated (SL3429R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Blank control (blue line): MCF7 (fixed with 80% ethanol (Overnight at 4°C) and then permeabilized with 90% ice-cold methanol for 30 min on ice).

Primary Antibody (green line): Rabbit Anti-phospho-STAT3 (Ser727) antibody (SL3429R), Dilution: 0.2µg /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC,Dilution: 1µg /test.