



# Stat3 Polyclonal Antibody

<b>Catalog No</b>	YP-Ab-02054
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human;Mouse;Rat
<b>Applications</b>	IF;WB;IHC;ELISA
<b>Gene Name</b>	STAT3
<b>Protein Name</b>	Signal transducer and activator of transcription 3
<b>Immunogen</b>	The antiserum was produced against synthesized peptide derived from human STAT3. AA range:672-721
<b>Specificity</b>	Stat3 Polyclonal Antibody detects endogenous levels of Stat3 protein.
<b>Formulation</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source</b>	Polyclonal, Rabbit,IgG
<b>Purification</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Dilution</b>	IF: 1:50-200 Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/5000. Not yet tested in other applications.
<b>Concentration</b>	1 mg/ml
<b>Purity</b>	≥90%
<b>Storage Stability</b>	-20°C/1 year
<b>Synonyms</b>	STAT3; APRF; Signal transducer and activator of transcription 3; Acute-phase response factor
<b>Observed Band</b>	88kD
<b>Cell Pathway</b>	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.
<b>Tissue Specificity</b>	Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Expressed in naive CD4(+) T cells as well as T-helper Th17, Th1 and Th2 cells (PubMed:31899195).
<b>Function</b>	disease:Defects in STAT3 are the cause of hyperimmunoglobulin E recurrent infection syndrome autosomal dominant (AD-HIES) [MIM:147060]; also known as hyper-IgE syndrome or Job syndrome. AD-HIES is 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.,function:Transcription factor that binds to the interleukin-6



(IL-6)-responsive elements identified in the promoters of various acute-phase protein genes. Activated by IL31 through IL31RA.,miscellaneous:Involved in the gp130-mediated signaling pathway.,online information:STAT3 entry,online information:STAT3 mutation db,PTM:Tyrosine phosphorylated in response to IL-6, IL-11, CNTF, LIF, CSF-1, EGF, PDGF, IFN-alpha an

### Background

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

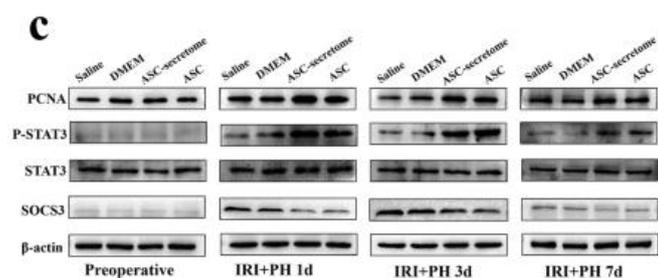
### matters needing attention

Avoid repeated freezing and thawing!

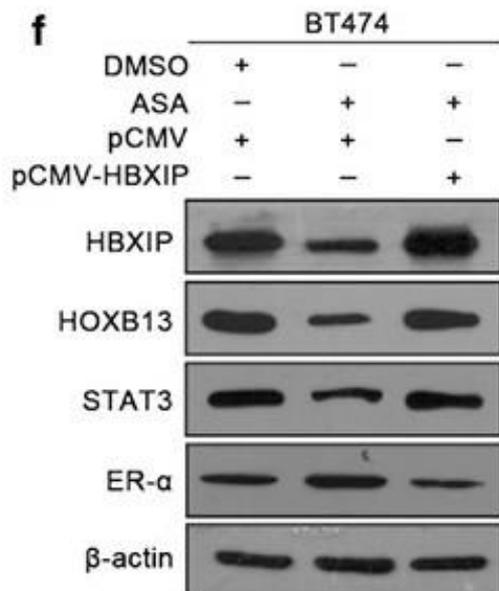
### Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

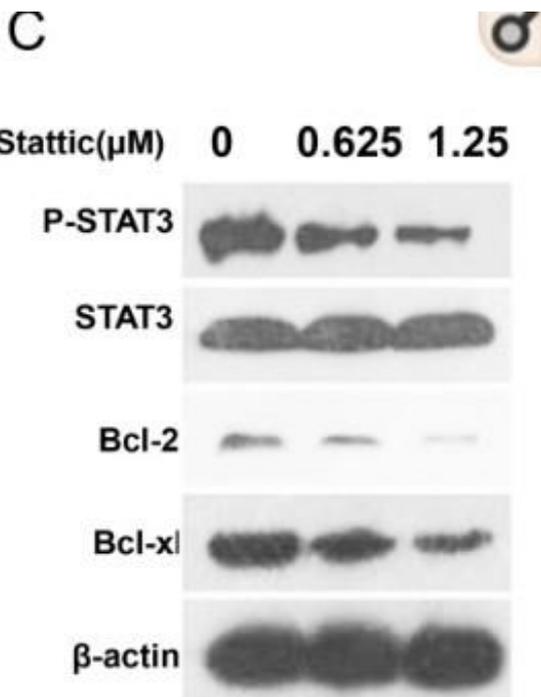
## Products Images



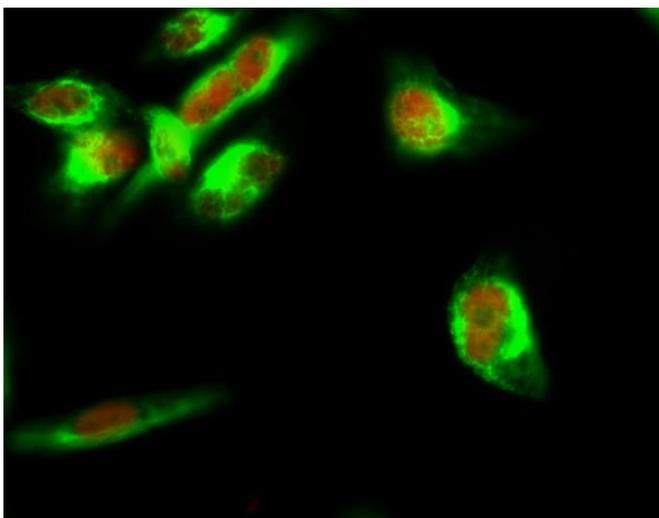
Jiao, Z., Ma, Y., Zhang, Q. et al. The adipose-derived mesenchymal stem cell secretome promotes hepatic regeneration in miniature pigs after liver ischaemia-reperfusion combined with partial resection. *Stem Cell Res Ther* 12, 218 (2021).



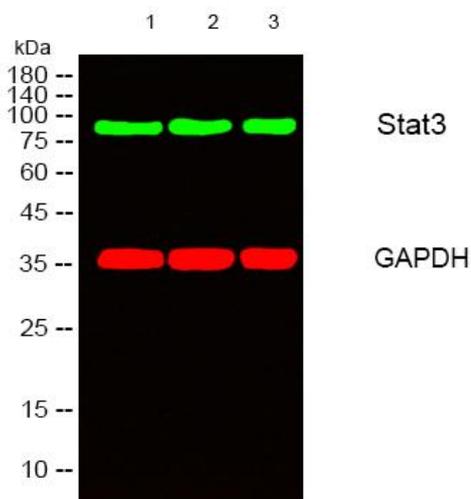
Liu, Bowen, et al. "Oncoprotein HBXIP enhances HOXB13 acetylation and co-activates HOXB13 to confer tamoxifen resistance in breast cancer." *Journal of hematology & oncology* 11.1 (2018): 26.



Liu, Yanmei, et al. "Cancer Stem Cells are Regulated by STAT3 Signalling in Wilms Tumour." *Journal of Cancer* 9.8 (2018): 1486.



Immunofluorescence analysis of HeLa cell. 1, Stat3 Polyclonal Antibody(red) was diluted at 1:200(4° overnight).  $\beta$ -tubulin Monoclonal Antibody(M7)(green) was diluted at 1:200(4° overnight). 2, Goat Anti Rabbit Alexa Fluor 594 Catalog:RS3611 was diluted at 1:1000(room temperature, 50min). Goat Anti Mouse Alexa Fluor 488 Catalog:RS3208 was diluted at 1:1000(room temperature, 50min).



Western blot analysis of lysates from 1) HepG2-UV, 2) K562, 3) AD293, 4) PC-3 cells, (Green) primary antibody was diluted at 1:1000, 4° over night, secondary antibody(cat:RS23920)was diluted at 1:10000, 37° 1hour. (Red) GAPDH Monoclonal Antibody(2B8) (cat:YM3029) antibody was diluted at 1:5000 as loading control, 4° over night, secondary antibody(cat:RS23710)was diluted at 1:10000, 37° 1hour.