

## Stat3 Polyclonal Antibody

<b>Catalog No :</b>	YT4443
<b>Reactivity :</b>	Human;Mouse;Rat
<b>Applications :</b>	IF;WB;IHC;ELISA
<b>Target :</b>	Stat3
<b>Fields :</b>	>>EGFR tyrosine kinase inhibitor resistance;>>Chemokine signaling pathway;>>HIF-1 signaling pathway;>>FoxO signaling pathway;>>Necroptosis;>>Signaling pathways regulating pluripotency of stem cells;>>JAK-STAT signaling pathway;>>Th17 cell differentiation;>>Prolactin signaling pathway;>>Adipocytokine signaling pathway;>>Insulin resistance;>>AGE-RAGE signaling pathway in diabetic complications;>>Growth hormone synthesis, secretion and action;>>Toxoplasmosis;>>Hepatitis C;>>Hepatitis B;>>Measles;>>Human cytomegalovirus infection;>>Kaposi sarcoma-associated herpesvirus infection;>>Epstein-Barr virus infection;>>Coronavirus disease - COVID-19;>>Pathways in cancer;>>Viral carcinogenesis;>>Proteoglycans in cancer;>>MicroRNAs in cancer;>>Chemical carcinogenesis - receptor activation;>>Pancreatic cancer;>>Acute myeloid leukemia;>>Non-small cell lung cancer;>>PD-L1 expression and PD-1 checkpoint pathway in cancer;>>Inflammatory bowel disease;>>Lipid and atherosclerosis
<b>Gene Name :</b>	STAT3
<b>Protein Name :</b>	Signal transducer and activator of transcription 3
<b>Human Gene Id :</b>	6774
<b>Human Swiss Prot No :</b>	P40763
<b>Mouse Gene Id :</b>	20848
<b>Mouse Swiss Prot No :</b>	P42227
<b>Rat Gene Id :</b>	25125
<b>Rat Swiss Prot No :</b>	P52631

<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>Dilution :</b>	IF 1:50-200 WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:5000. Not yet tested in other applications.
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Concentration :</b>	1 mg/ml
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Do not lower than -25°C)
<b>Observed Band :</b>	88kD
<b>Cell Pathway :</b>	Regulation_Microtubule; SAPK_JNK; Stem cell pathway; Protein_Acetylation
<b>Background :</b>	<p>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</p>
<b>Function :</b>	<p>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</p>

information:STAT3 mutation db,PTM:Tyrosine phosphorylated in response to IL-6, IL-11, CNTF, LIF, CSF-1, EGF, PDGF, IFN-alpha an

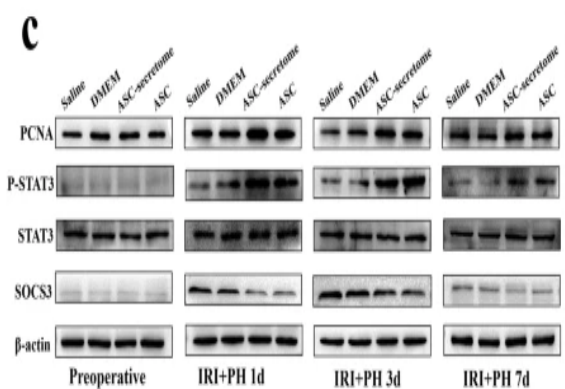
### Subcellular Location :

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.

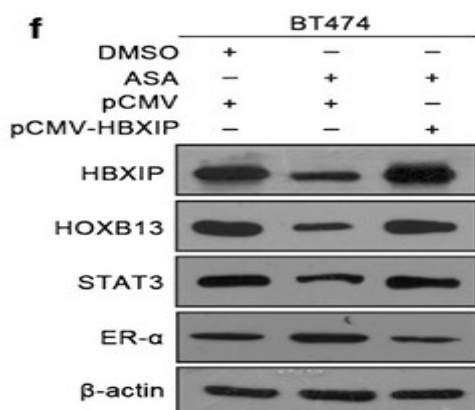
### Expression :

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).

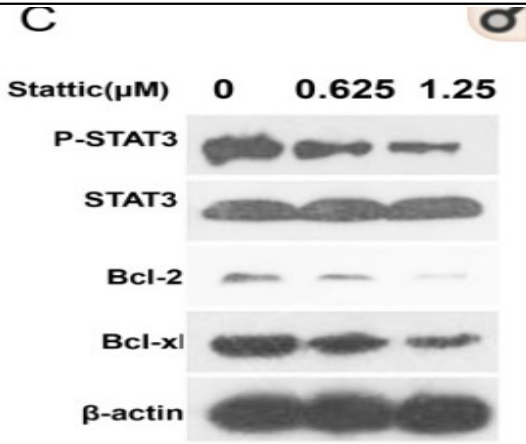
## Products Images



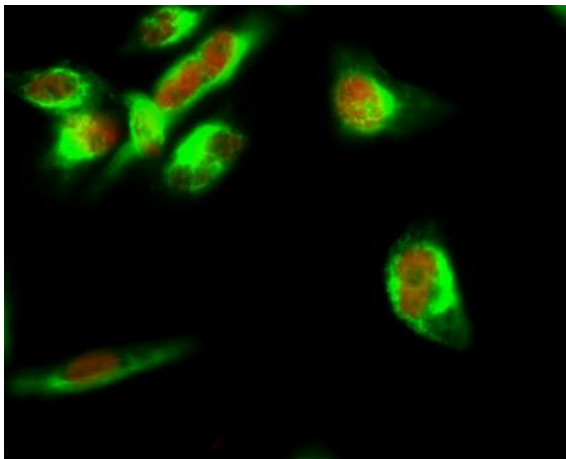
Jiao, Z., Ma, Y., Zhang, Q. et al. The adipose-derived mesenchymal stem cell secretome promotes hepatic regeneration in miniature pigs after liver ischaemia-reperfusion combined with partial resection. *Stem Cell Res Ther* 12, 218 (2021).



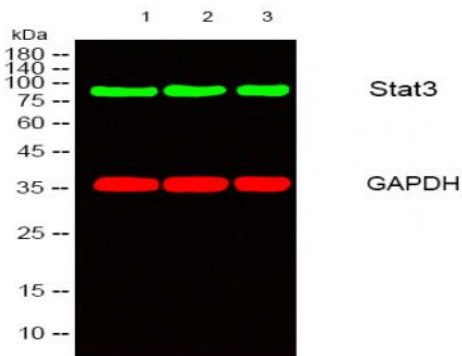
Liu, Bowen, et al. "Oncoprotein HBXIP enhances HOXB13 acetylation and co-activates HOXB13 to confer tamoxifen resistance in breast cancer." *Journal of hematology & oncology* 11.1 (2018): 26.



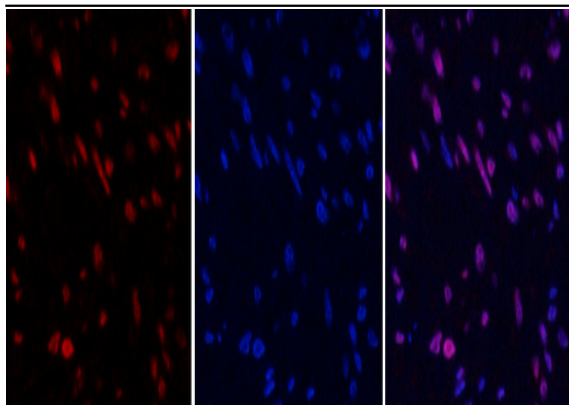
Liu, Yanmei, et al. "Cancer Stem Cells are Regulated by STAT3 Signalling in Wilms Tumour." *Journal of Cancer* 9.8 (2018): 1486.



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.

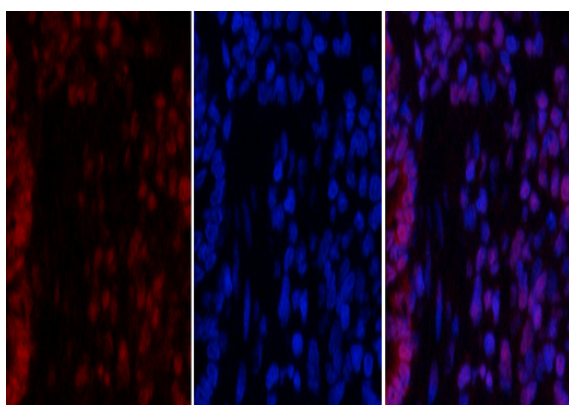


A

B

C

Immunofluorescence analysis of human-uterus tissue. 1, Stat3 Polyclonal Antibody (red) was diluted at 1:200 (4 °C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

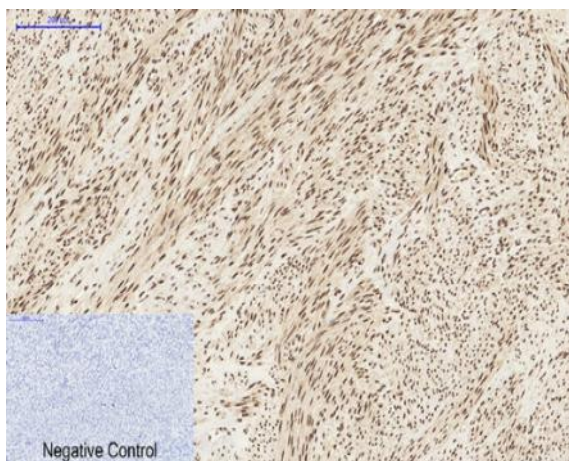


A

B

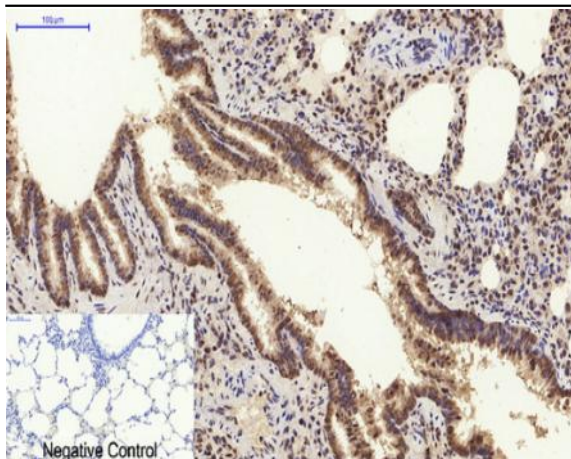
C

Immunofluorescence analysis of rat-lung tissue. 1, Stat3 Polyclonal Antibody (red) was diluted at 1:200 (4 °C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

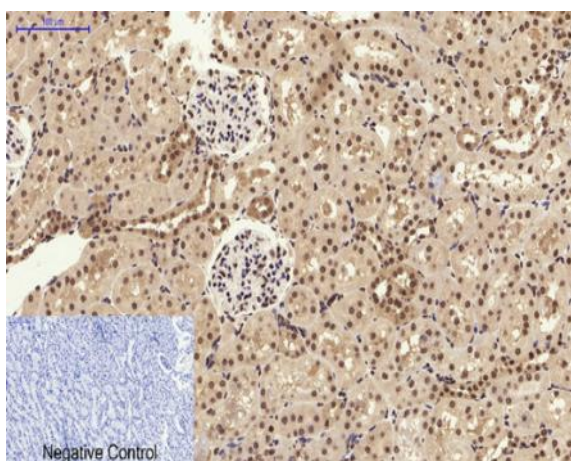


Immunohistochemical analysis of paraffin-embedded Human-uterus tissue. 1, Stat3 Polyclonal Antibody was diluted at 1:200 (4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98 °C, 20 min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30 min). Negative control was used by secondary antibody only.

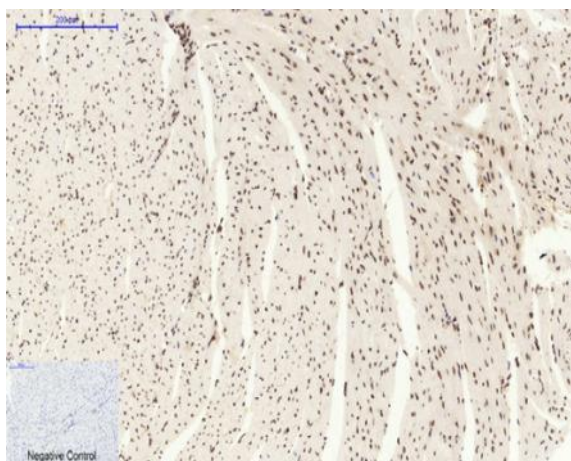




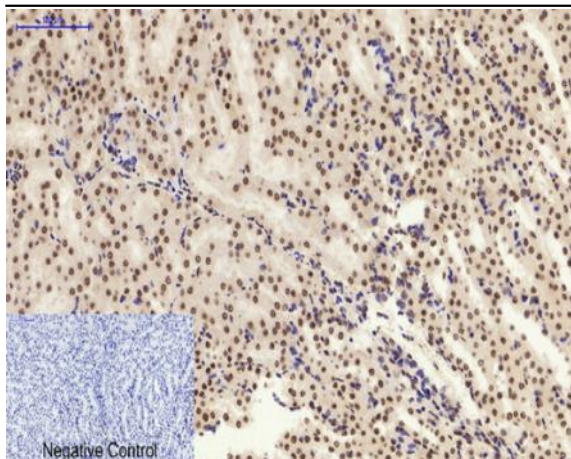
Immunohistochemical analysis of paraffin-embedded Rat-lung tissue. 1, Stat3 Polyclonal Antibody was diluted at 1:200(4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98 °C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



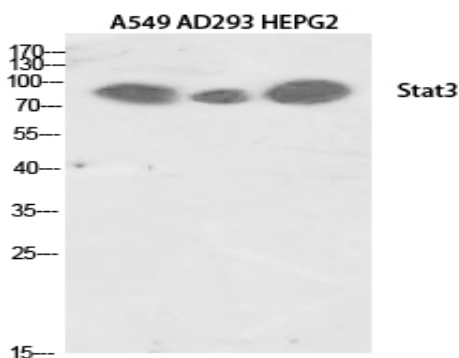
Immunohistochemical analysis of paraffin-embedded Rat-kidney tissue. 1, Stat3 Polyclonal Antibody was diluted at 1:200(4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98 °C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



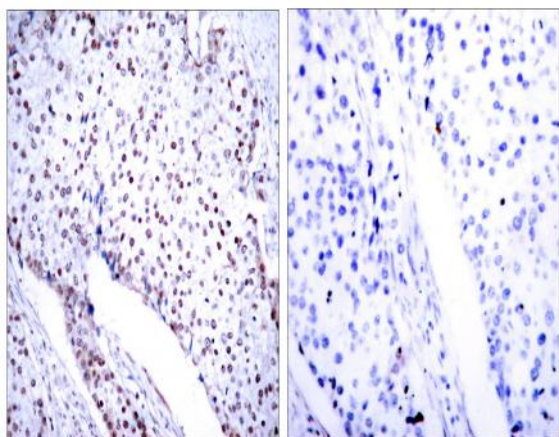
Immunohistochemical analysis of paraffin-embedded Mouse-heart tissue. 1, Stat3 Polyclonal Antibody was diluted at 1:200(4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98 °C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



Immunohistochemical analysis of paraffin-embedded Mouse-kidney tissue. 1, Stat3 Polyclonal Antibody was diluted at 1:200(4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98 °C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



Western Blot analysis of A549 AD293 HEPG2 using Stat3 Polyclonal Antibody. Antibody was diluted at 1:2000



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue, using STAT3 Antibody. The picture on the right is blocked with the synthesized peptide.