

Stat3 (phospho Ser727) Polyclonal Antibody

Catalog No :	YP0250
Reactivity :	Human;Mouse;Rat;Monkey
Applications :	IF;WB;IHC;IP;ELISA
Target :	Stat3
Fields :	>>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
Gene Name :	STAT3
Protein Name :	Signal transducer and activator of transcription 3
Human Gene Id :	6774
Human Swiss Prot No :	P40763
Mouse Gene Id :	20848
Mouse Swiss Prot No :	P42227
Rat Gene Id :	25125
Rat Swiss Prot No :	P52631

Immunogen :	The antiserum was produced against synthesized peptide derived from human STAT3 around the phosphorylation site of Ser727. AA range:694-743
Specificity :	Phospho-Stat3 (S727) Polyclonal Antibody detects endogenous levels of Stat3 protein only when phosphorylated at S727.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Polyclonal, Rabbit,IgG
Dilution :	IF 1:50-200 WB 1:500 - 1:2000. IHC 1:100 - 1:300. Immunoprecipitation: 2-5 ug:mg lysate. ELISA: 1:10000. Not yet tested in other applications.
Purification :	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Concentration :	1 mg/ml
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Observed Band :	85kD
Cell Pathway :	Regulation_Microtubule; SAPK_JNK; Stem cell pathway; Protein_Acetylation
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
Function :	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

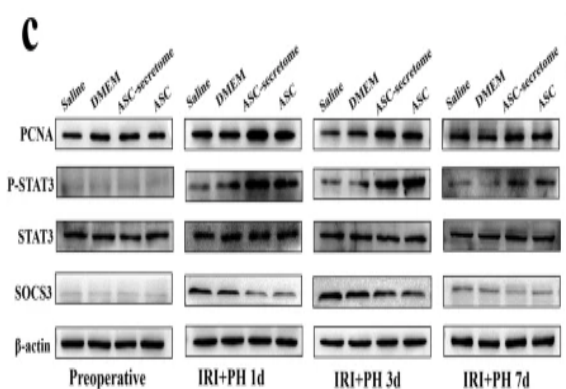
Subcellular Location :

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.

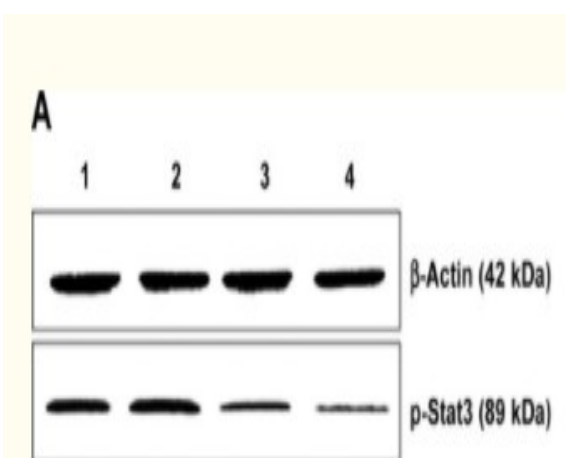
Expression :

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).

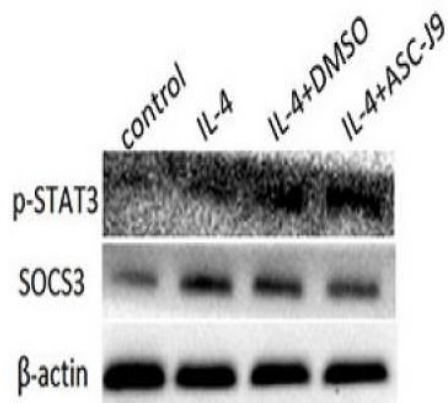
Products Images



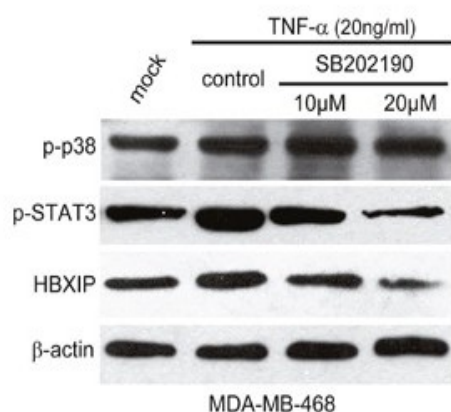
Jiao, Z., Ma, Y., Zhang, Q. et al. The adipose-derived mesenchymal stem cell secretome promotes hepatic regeneration in miniature pigs after liver ischaemia-reperfusion combined with partial resection. *Stem Cell Res Ther* 12, 218 (2021).



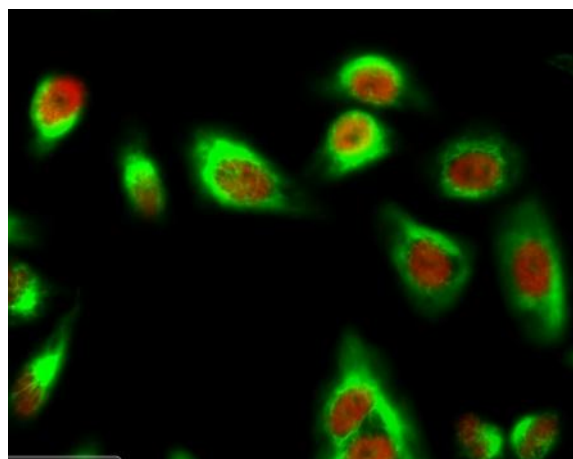
Tang, Qiusha, et al. "Combination of PEI-MnO₂, ZnO, Fe₂O₄ nanoparticles and pHsp 70-HSV-TK/GCV with magnet-induced heating for treatment of hepatoma." *International journal of nanomedicine* 10 (2015): 7129.

B


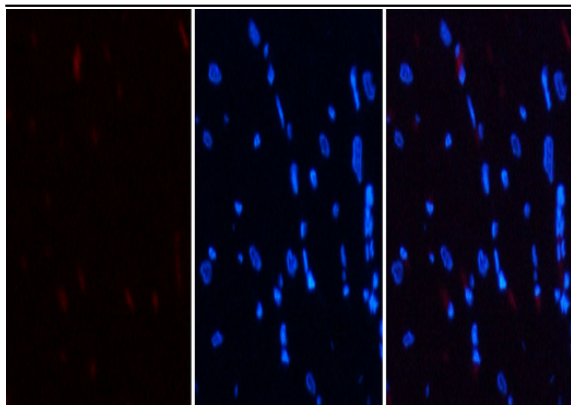
Ma, Wenhan, et al. "Suppressed androgen receptor expression promotes M2 macrophage reprogramming through the STAT3/SOCS3 pathway." *EXCLI JOURNAL* 18 (2019): 21-29.



Cai, Xiaoli, et al. "Inflammatory factor TNF- α promotes the growth of breast cancer via the positive feedback loop of TNFR1/NF- κ B (and/or p38)/p-STAT3/HBXIP/TNFR1." *Oncotarget* 8.35 (2017): 58338.



Immunofluorescence analysis of HeLa cell. 1, Stat3 (phospho Ser727) Polyclonal Antibody (red) was diluted at 1:200 (4 $^{\circ}$ overnight). Caspase 9 Monoclonal Antibody (3-20) (green) was diluted at 1:200 (4 $^{\circ}$ 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).

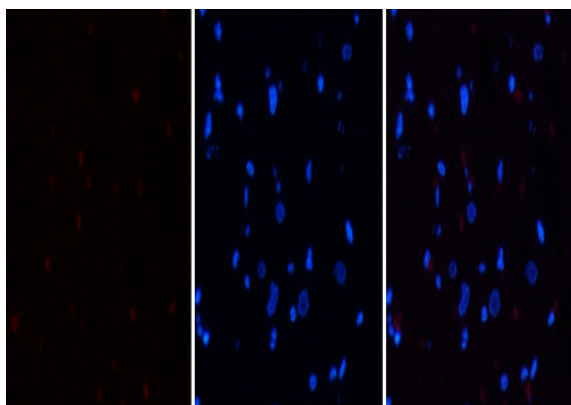


A

B

C

Immunofluorescence analysis of rat-heart tissue. 1, Stat3 (phospho Ser727) 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

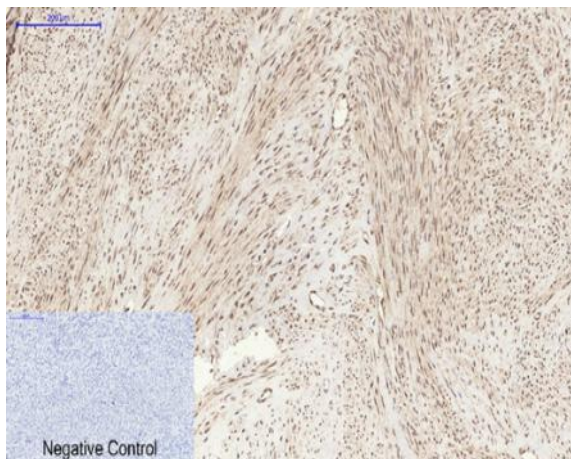


A

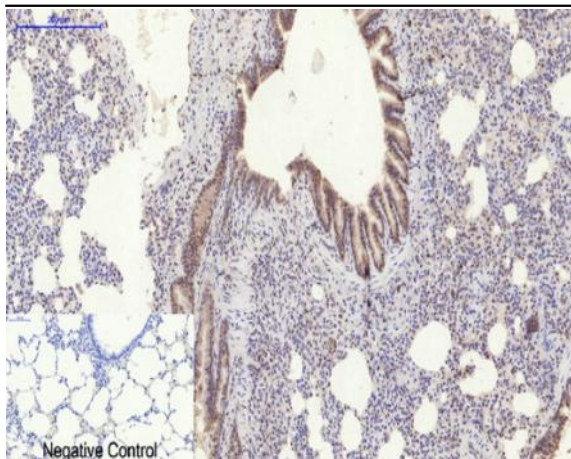
B

C

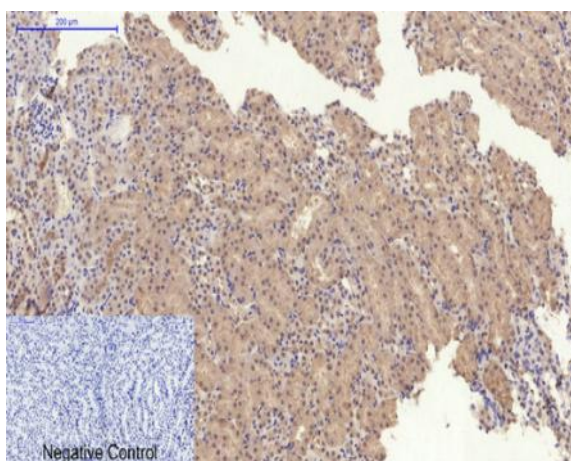
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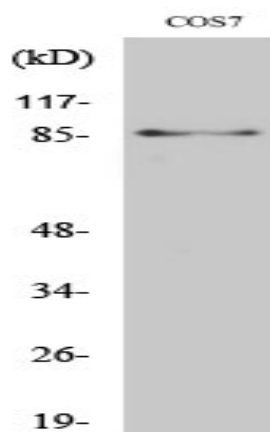
Immunohistochemical analysis of paraffin-embedded Human-uterus tissue. 1, Stat3 (phospho Ser727) Polyclonal Antibody was diluted at 1:200 (4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C, 20 min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30 min). Negative control was used by secondary antibody only.



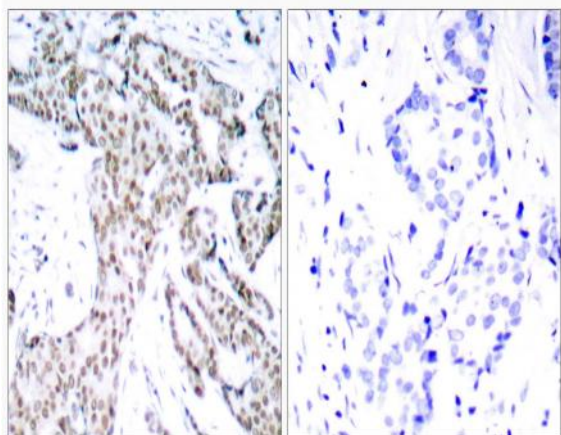
Immunohistochemical analysis of paraffin-embedded Rat-lung tissue. 1, Stat3 (phospho Ser727) Polyclonal Antibody was diluted at 1:200(4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98 °C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



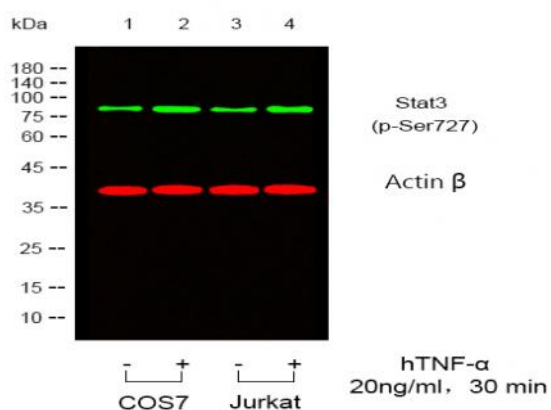
Immunohistochemical analysis of paraffin-embedded Mouse-kidney tissue. 1, Stat3 (phospho Ser727) Polyclonal Antibody was diluted at 1:200(4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98 °C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



Western Blot analysis of COS7 cells using Phospho-Stat3 (S727) Polyclonal Antibody diluted at 1:2000



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using STAT3 (Phospho-Ser727) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from COS7, Jurkat cells, treated or untreated with TNF α , (Green) primary antibody was diluted at 1:1000, 4 $^{\circ}$ over night, secondary antibody was diluted at 1:10000, 37 $^{\circ}$ 1 hour. (Red) loading control antibody was diluted at 1:5000 as loading control, 4 $^{\circ}$ over night, secondary antibody was diluted at 1:10000, 37 $^{\circ}$ 1 hour.