



Stat3 (phospho Tyr705) Polyclonal Antibody

Catalog No	YP-Ab-01280
Isotype	IgG
Reactivity	Human;Mouse;Rat;Pig(Test by out customer)
Applications	IF;WB;IHC;IP;ELISA
Gene Name	STAT3
Immunogen	The antiserum was produced against synthesized peptide derived from human STAT3 around the phosphorylation site of Tyr705. AA range:672-721
Specificity	Phospho-Stat3 (Y705) Polyclonal Antibody detects endogenous levels of Stat3 protein only when phosphorylated at Y705.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	IF: 1:50-200 Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunoprecipitation: 2-5 ug/mg lysate. ELISA: 1/20000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	STAT 3;STAT-3;APRF;HIES;FLJ20882;MGC16063;STAT3;pAb;polyclonal;STAT3 P-Y705;antibody;antibodies;sample;dbdabs;Signal transducer and activator of transcription 3;Acute-phase response factor
Observed Band	88kD
Calculated Molecular Weight	88kD
Cell Pathway	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.
Tissue Specificity	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).



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

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!

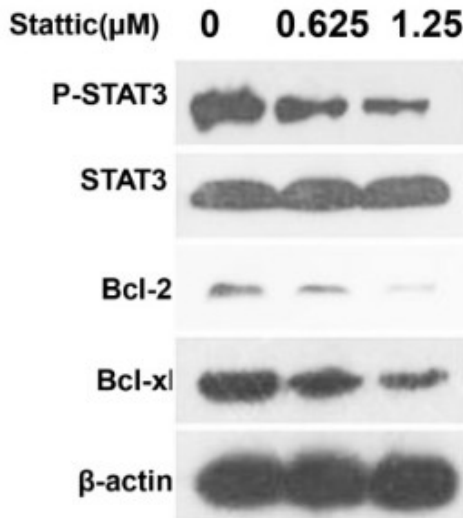
Usage suggestions

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

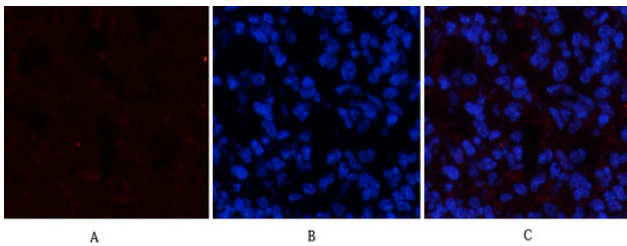


Products Images

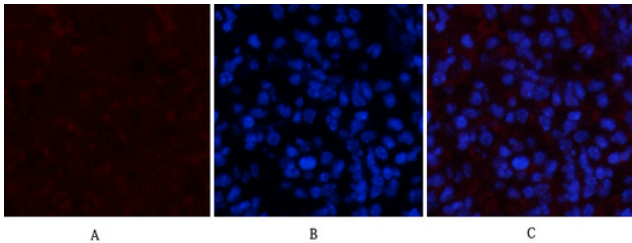
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Liu, Yanmei, et al. "Cancer Stem Cells are Regulated by STAT3 Signalling in Wilms Tumour." *Journal of Cancer* 9.8 (2018): 1486.

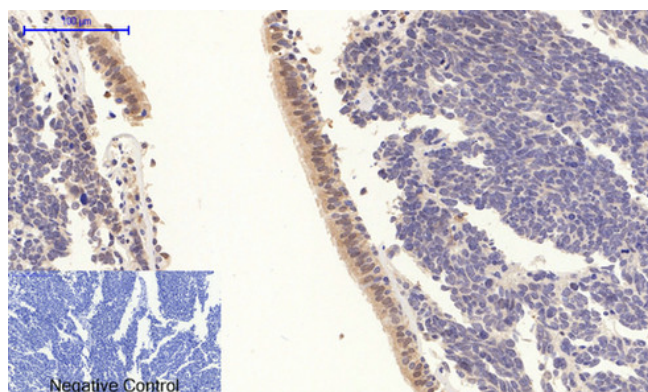


Immunofluorescence analysis of mouse-spleen tissue. 1, Stat3 (phospho Tyr705) Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min). 3, Picture B: DAPI (blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



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Western Blot analysis of our customer's samples using primary antibody diluted at 1:500. The picture was kindly provided by our customer. Cell lysate was extracted by Minute™ Plasma Membrane Protein Isolation and Cell Fractionation Kit (SM-005, Inventbiotech, MN, USA).



Immunohistochemical analysis of paraffin-embedded Human-lung-cancer tissue. 1, Stat3 (phospho Tyr705) 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.