

Anti-Phospho-STAT3-(S727) Antibody



Description

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.

Model	STJ116371
Host	Rabbit
Reactivity	Human
Applications	WB
Immunogen	A synthetic phosphorylated peptide around S727 of human Stat3 (NP_644805.1).
Gene ID	6774
Gene Symbol	STAT3
Dilution range	WB 1:500 - 1:2000
Tissue Specificity	Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas

Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	Signal transducer and activator of transcription 3 Acute-phase response factor
Molecular Weight	88.068 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:11364OMIM:102582Reactome:R-HSA-1059683
Alternative Names	Signal transducer and activator of transcription 3 Acute-phase response factor
Function	Signal transducer and transcription activator that mediates cellular responses to interleukins, KITLG/SCF, LEP and other growth factors ,
Cellular Localization	Cytoplasm, Nucleus,
Post-translational Modifications	Tyrosine phosphorylated upon stimulation with EGF, Tyrosine phosphorylated in response to constitutively activated FGFR1, FGFR2, FGFR3 and FGFR4 , Activated through tyrosine phosphorylation by BMX, Tyrosine phosphorylated in response to IL6, IL11, LIF, CNTF, KITLG/SCF, CSF1, EGF, PDGF, IFN-alpha, LEP 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, Dephosphorylation on tyrosine residues by PTPN2 negatively regulates IL6/interleukin-6 signaling,