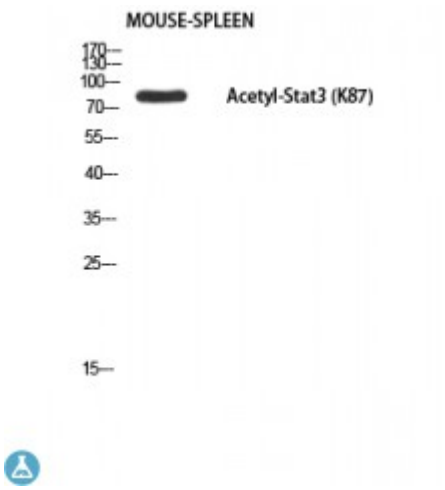
Anti-Stat3 (Acetyl Lys87) antibody



Description	Rabbit polyclonal to Stat3 (Acetyl Lys87).

Model	STJ97699
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, WB
Immunogen	Synthesized peptide derived from human Stat3 around the acetylation site of K87.
Gene ID	6774
Gene Symbol	STAT3
Dilution range	WB 1:500-1:2000ELISA 1:10000
Specificity	Acetyl-Stat3 (K87) Polyclonal Antibody detects endogenous levels of Stat3 around the acetylation site of K87 protein.
Tissue Specificity	Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Signal transducer and activator of transcription 3 Acute-phase response factor
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG

Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:11364OMIM:102582
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 . Once activated, recruits coactivators, such as NCOA1 or MED1, to the promoter region of the target gene . May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4 . Binds to the interleukin-6 (IL-6)-responsive elements identified in the promoters of various acute-phase protein genes . Activated by IL31 through IL31RA . Acts as a regulator of inflammatory response by regulating differentiation of naive CD4(+) T-cells into T-helper Th17 or regulatory T-cells (Treg): deacetylation and oxidation of lysine residues by LOXL3, leads to disrupt STAT3 dimerization and inhibit its transcription activity . Involved in cell cycle regulation by inducing the expression of key genes for the progression from G1 to S phase, such as CCND1 . Mediates the effects of LEP on melanocortin production, body energy homeostasis and lactation . May play an apoptotic role by transctivating BIRC5 expression under LEP activation . Cytoplasmic STAT3 represses macroautophagy by inhibiting EIF2AK2/PKR activity . Plays a crucial role in basal beta cell functions, such as regulation of insulin secretion .
Cellular Localization	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.
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. Acetylated on lysine residues by CREBBP. Deacetylation by LOXL3 leads to disrupt STAT3 dimerization and inhibit STAT3 transcription activity . Oxidation of lysine residues to allysine on STAT3 preferentially takes place on lysine residues that are

acetylated . Some lysine residues are oxidized to allysine by LOXL3, leading to disrupt STAT3 dimerization and inhibit STAT3 transcription activity . Oxidation of lysine residues to allysine on STAT3 preferentially takes place on lysine residues that are acetylated .