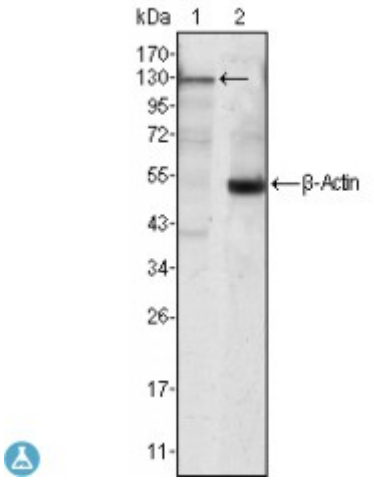
Anti-JAK3 antibody



Description	Mouse monoclonal to JAK3.

Model	STJ98188
Host	Mouse
Reactivity	Human, Mouse
Applications	ELISA, FC, IF, WB
Immunogen	Purified recombinant fragment of human JAK3 expressed in E. Coli.
Gene ID	3718
Gene Symbol	JAK3
Dilution range	WB 1:500-1:2000IF 1:200-1:1000FC 1:200-1:400ELISA 1:10000
Specificity	JAK3 Monoclonal Antibody detects endogenous levels of JAK3 protein.
Tissue Specificity	In NK cells and an NK-like cell line but not in resting T-cells or in other tissues. The S-form is more commonly seen in hematopoietic lines, whereas the B-form is detected in cells both of hematopoietic and epithelial origins.
Purification	Affinity purification
Clone ID	5H2
Note	For Research Use Only (RUO).
Protein Name	Tyrosine-protein kinase JAK3 Janus kinase 3 JAK-3 Leukocyte janus kinase L-JAK
Clonality	Monoclonal
Conjugation	Unconjugated

Isotype	IgG1
Formulation	Ascitic fluid containing 0.03% sodium azide.
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:6193OMIM:600173
Alternative Names	Tyrosine-protein kinase JAK3 Janus kinase 3 JAK-3 Leukocyte janus kinase L-JAK
Function	Non-receptor tyrosine kinase involved in various processes such as cell growth, development, or differentiation. Mediates essential signaling events in both innate and adaptive immunity and plays a crucial role in hematopoiesis during T-cells development. In the cytoplasm, plays a pivotal role in signal transduction via its association with type I receptors sharing the common subunit gamma such as IL2R, IL4R, IL7R, IL9R, IL15R and IL21R. Following ligand binding to cell surface receptors, phosphorylates specific tyrosine residues on the cytoplasmic tails of the receptor, creating docking sites for STATs proteins. Subsequently, phosphorylates the STATs proteins once they are recruited to the receptor. Phosphorylated STATs then form homodimer or heterodimers and translocate to the nucleus to activate gene transcription. For example, upon IL2R activation by IL2, JAK1 and JAK3 molecules bind to IL2R beta (IL2RB) and gamma chain (IL2RG) subunits inducing the tyrosine phosphorylation of both receptor subunits on their cytoplasmic domain. Then, STAT5A AND STAT5B are recruited, phosphorylated and activated by JAK1 and JAK3. Once activated, dimerized STAT5 translocates to the nucleus and promotes the transcription of specific target genes in a cytokine-specific fashion.
Sequence and Domain Family	Possesses two phosphotransferase domains. The second one probably contains the catalytic domain , while the presence of slight differences suggest a different role for domain 1.
Cellular Localization	Endomembrane system Cytoplasm
Post-translational Modifications	Tyrosine phosphorylated in response to IL-2 and IL-4. Dephosphorylation of Tyr-980 and Tyr-981 by PTPN2 negatively regulates cytokine-mediated signaling (Probable).