

# JAK3 Antibody

Rabbit mAb

Catalog # AP91446

## Product Information

<b>Application</b>	WB, IF, ICC
<b>Primary Accession</b>	<a href="#">P52333</a>
<b>Reactivity</b>	Human
<b>Clonality</b>	Monoclonal
<b>Other Names</b>	JAK 3; JAK L; JAKL; Janus kinase 3 (a protein tyrosine kinase, leukocyte); L JAK; Leukocyte janus kinase; LJAK; Protein tyrosine kinase leukocyte;
<b>Isotype</b>	Rabbit IgG
<b>Host</b>	Rabbit
<b>Calculated MW</b>	125099

## Additional Information

<b>Dilution</b>	WB 1:500~1:2000 ICC/IF 1:50~1:200
<b>Purification</b>	Affinity-chromatography
<b>Immunogen</b>	A synthesized peptide derived from human JAK3
<b>Description</b>	Tyrosine kinase of the non-receptor type, involved in the interleukin-2 and interleukin-4 signaling pathway. Phosphorylates STAT6, IRS1, IRS2 and PI3K.
<b>Storage Condition and Buffer</b>	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

## Protein Information

<b>Name</b>	JAK3 ( <a href="#">HGNC:6193</a> )
<b>Function</b>	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.

**Cellular Location**

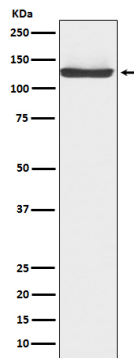
Endomembrane system; Peripheral membrane protein. Cytoplasm

**Tissue Location**

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.

## Images

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Western blot analysis of JAK3 expression in TF-1 cell lysate.

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