

# JAK2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP20711c

## Product Information

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<b>Application</b>	WB, E
<b>Primary Accession</b>	<a href="#">O60674</a>
<b>Reactivity</b>	Human, Rat, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB43813
<b>Calculated MW</b>	130674

## Additional Information

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<b>Gene ID</b>	3717
<b>Other Names</b>	Tyrosine-protein kinase JAK2, Janus kinase 2, JAK-2, JAK2
<b>Target/Specificity</b>	This JAK2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 834-868 amino acids from the C-terminal region of human JAK2.
<b>Dilution</b>	WB~~1:500 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	JAK2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	JAK2 ( <a href="#">HGNC:6192</a> )
<b>Function</b>	Non-receptor tyrosine kinase involved in various processes such as cell growth, development, differentiation or histone modifications. Mediates essential signaling events in both innate and adaptive immunity. In the cytoplasm, plays a pivotal role in signal transduction via its association with type I receptors such as growth hormone (GHR), prolactin (PRLR), leptin (LEPR), erythropoietin (EPOR), thrombopoietin receptor (MPL/TPOR); or type II

receptors including IFN- alpha, IFN-beta, IFN-gamma and multiple interleukins (PubMed:[15690087](#), PubMed:[7615558](#), PubMed:[9657743](#), PubMed:[15899890](#)). Following ligand- binding to cell surface receptors, phosphorylates specific tyrosine residues on the cytoplasmic tails of the receptor, creating docking sites for STATs proteins (PubMed:[15690087](#), PubMed:[9618263](#)). 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, cell stimulation with erythropoietin (EPO) during erythropoiesis leads to JAK2 autophosphorylation, activation, and its association with erythropoietin receptor (EPOR) that becomes phosphorylated in its cytoplasmic domain (PubMed:[9657743](#)). Then, STAT5 (STAT5A or STAT5B) is recruited, phosphorylated and activated by JAK2. Once activated, dimerized STAT5 translocates into the nucleus and promotes the transcription of several essential genes involved in the modulation of erythropoiesis. Part of a signaling cascade that is activated by increased cellular retinol and that leads to the activation of STAT5 (STAT5A or STAT5B) (PubMed:[21368206](#)). In addition, JAK2 mediates angiotensin-2-induced ARHGEF1 phosphorylation (PubMed:[20098430](#)). Plays a role in cell cycle by phosphorylating CDKN1B (PubMed:[21423214](#)). Cooperates with TEC through reciprocal phosphorylation to mediate cytokine-driven activation of FOS transcription. In the nucleus, plays a key role in chromatin by specifically mediating phosphorylation of 'Tyr-41' of histone H3 (H3Y41ph), a specific tag that promotes exclusion of CBX5 (HP1 alpha) from chromatin (PubMed:[19783980](#)). Up-regulates the potassium voltage- gated channel activity of KCNA3 (PubMed:[25644777](#)).

<b>Cellular Location</b>	Endomembrane system; Peripheral membrane protein. Cytoplasm. Nucleus
<b>Tissue Location</b>	Ubiquitously expressed throughout most tissues.

## Background

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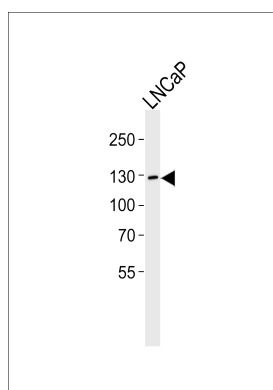
## References

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- Saltzman A.,et al.Biochem. Biophys. Res. Commun. 246:627-633(1998).  
 Dalal I.,et al.Blood 91:844-851(1998).  
 Peeters P.,et al.Blood 90:2535-2540(1997).  
 Humphray S.J.,et al.Nature 429:369-374(2004).

## Images

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Western blot analysis of lysate from LNCaP cell line, using JAK2 Antibody (C-term)(Cat. #AP20711c). AP20711c was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.