

**Goat Anti-JAK2 Antibody (C Terminus)**  
**Purified Goat Polyclonal Antibody**  
**Catalog # AF4147a**

**Specification**

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**Goat Anti-JAK2 Antibody (C Terminus) - Product Information**

Application	FC
Primary Accession	<a href="#">O60674</a>
Other Accession	<a href="#">AAC23653.1</a>
Reactivity	Human
Predicted	Human
Host	Goat
Clonality	Polyclonal
Concentration	0.5
Calculated MW	130674

**Goat Anti-JAK2 Antibody (C Terminus) - Additional Information**

**Gene ID** 3717

**Other Names**

JAK2; Janus kinase 2 (a protein tyrosine kinase); tyrosine-protein kinase JAK2

**Format**

Supplied at 0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin. Aliquot and store at -20°C. Minimize freezing and thawing.

**Immunogen**

Peptide with sequence C-RVDQVRDNMAG, from the C Terminus of the protein sequence according to AAC23653.1.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Goat Anti-JAK2 Antibody (C Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-JAK2 Antibody (C Terminus) - Protein Information**

**Name** JAK2 ([HGNC:6192](#))

**Function**

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 (THPO); or type II receptors including IFN-alpha, IFN- beta, IFN-gamma and multiple interleukins (PubMed:<a href="http://www.uniprot.org/citations/7615558" target="\_blank">7615558</a>). 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:<a href="http://www.uniprot.org/citations/9618263" target="\_blank">9618263</a>). 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. 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:<a href="http://www.uniprot.org/citations/21368206" target="\_blank">21368206</a>). In addition, JAK2 mediates angiotensin-2-induced ARHGEF1 phosphorylation (PubMed:<a href="http://www.uniprot.org/citations/20098430" target="\_blank">20098430</a>). Plays a role in cell cycle by phosphorylating CDKN1B (PubMed:<a href="http://www.uniprot.org/citations/21423214" target="\_blank">21423214</a>). 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:<a href="http://www.uniprot.org/citations/19783980" target="\_blank">19783980</a>).

#### **Cellular Location**

Endomembrane system; Peripheral membrane protein. Cytoplasm. Nucleus

#### **Tissue Location**

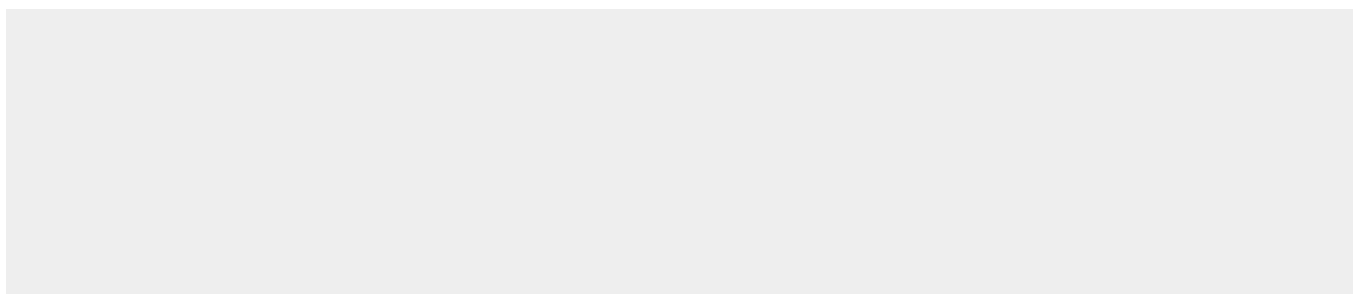
Ubiquitously expressed throughout most tissues.

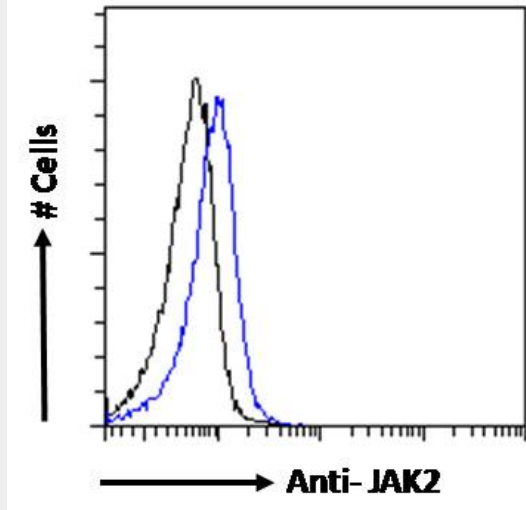
### **Goat Anti-JAK2 Antibody (C Terminus) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Goat Anti-JAK2 Antibody (C Terminus) - Images**





AF4147a Flow cytometric analysis of paraformaldehyde fixed K562 cells (blue line), permeabilized with 0.5% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (0.4ug/ml). IgG control: Unimmunized goat IgG (black line) f

#### **Goat Anti-JAK2 Antibody (C Terminus) - References**

Jak2 is essential for signaling through a variety of cytokine receptors. Parganas E, Wang D, Stravopodis D, Topham DJ, Marine JC, Teglund S, Vanin EF, Bodner S, Colamonici OR, van Deursen JM, Grosveld G, Ihle JN. Cell 1998 May 1;93(3):385-95