

**Anti-JAK2 pY972 (RABBIT) Antibody**  
**JAK2 phospho Y972 Antibody**  
**Catalog # ASR5695****Specification**

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**Anti-JAK2 pY972 (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, IHC, E, I, LCI
Application Note	Anti-JAK2 antibody is useful for ELISA, immunohistochemistry, and Western Blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~130kDa corresponding to the appropriate cell lysate or extract.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	JAK II affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a region near the pY372 region of human JAK II.
Stabilizer	30% Glycerol

**Anti-JAK2 pY972 (RABBIT) Antibody - Additional Information****Gene ID** 3717**Purity**

Anti-JAK II was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest cross-reactivity with human, orangutan, rat, and pig based on 100% sequence homology. Cross-reactivity with JAK II from other sources has not been determined.

**Storage Condition**

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

**Precautions Note**

This product is for research use only and is not intended for therapeutic or diagnostic applications.

**Anti-JAK2 pY972 (RABBIT) Antibody - 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 receptor (MPL/TPOR); or type II receptors including IFN-alpha, IFN-beta, IFN-gamma and multiple interleukins (PubMed: [15690087](http://www.uniprot.org/citations/15690087), PubMed: [7615558](http://www.uniprot.org/citations/7615558), PubMed: [9657743](http://www.uniprot.org/citations/9657743), PubMed: [15899890](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/15690087), PubMed: [9618263](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/21368206)). In addition, JAK2 mediates angiotensin-2-induced ARHGEF1 phosphorylation (PubMed: [20098430](http://www.uniprot.org/citations/20098430)). Plays a role in cell cycle by phosphorylating CDKN1B (PubMed: [21423214](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/19783980)). Up-regulates the potassium voltage- gated channel activity of KCNA3 (PubMed: [25644777](http://www.uniprot.org/citations/25644777)).

### Cellular Location

Endomembrane system; Peripheral membrane protein. Cytoplasm. Nucleus

### Tissue Location

Ubiquitously expressed throughout most tissues.

### Anti-JAK2 pY972 (RABBIT) Antibody - 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](#)

**Anti-JAK2 pY972 (RABBIT) Antibody - Images****Anti-JAK2 pY972 (RABBIT) Antibody - Background**

Janus Kinase 2 (JAK2) antibody is essential for signaling thorough a variety of cytokine receptors. Phosphorylation of JAK is essential for downstream signaling. JAK kinases are known to phosphorylate several substrate including members of the STAT family of proteins. Anti-JAK II antibody is ideal for researchers investigating Cancer, Signal Transduction, Epigenetics and Nuclear Signaling, and Cell Biology research.