

**Anti-Phospho-JAK2 (Y1007 + Y1008) Monoclonal Antibody**  
**Catalog # ABO14379****Specification****Anti-Phospho-JAK2 (Y1007 + Y1008) Monoclonal Antibody - Product Information**

Application	WB, IHC, IF, ICC, IP, FC
Primary Accession	<a href="#">O60674</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

**Description**

Anti-Phospho-JAK2 (Y1007 + Y1008) Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

**Anti-Phospho-JAK2 (Y1007 + Y1008) Monoclonal Antibody - Additional Information**

**Gene ID** 3717

**Other Names**

Tyrosine-protein kinase JAK2, 2.7.10.2, Janus kinase 2, JAK-2, JAK2 (<a href="http://www.genenames.org/cgi-bin/gene\_symbol\_report?hgnc\_id=6192" target="\_blank">HGNC:6192</a>)

**Application Details**

WB 1:500-1:2000<br>IHC 1:50-1:200<br>ICC/IF 1:50-1:200<br>IP 1:50<br>FC 1:30

**Contents**

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

**Immunogen**

A synthesized peptide derived from human Phospho-JAK2 (Y1007 + Y1008)

**Purification**

Affinity-chromatography

**Storage**

**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

**Anti-Phospho-JAK2 (Y1007 + Y1008) Monoclonal 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:<a href="http://www.uniprot.org/citations/15690087" target="\_blank">15690087</a>, PubMed:<a href="http://www.uniprot.org/citations/7615558" target="\_blank">7615558</a>, PubMed:<a href="http://www.uniprot.org/citations/9657743" target="\_blank">9657743</a>, PubMed:<a href="http://www.uniprot.org/citations/15899890" target="\_blank">15899890</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/15690087" target="\_blank">15690087</a>, 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 (PubMed:<a href="http://www.uniprot.org/citations/9657743" target="\_blank">9657743</a>). 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>). Up-regulates the potassium voltage- gated channel activity of KCNA3 (PubMed:<a href="http://www.uniprot.org/citations/25644777" target="\_blank">25644777</a>).

#### **Cellular Location**

Endomembrane system; Peripheral membrane protein. Cytoplasm. Nucleus

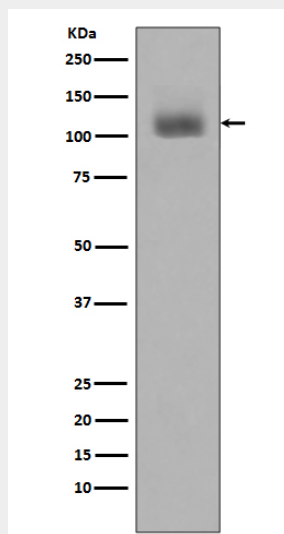
#### **Tissue Location**

Ubiquitously expressed throughout most tissues.

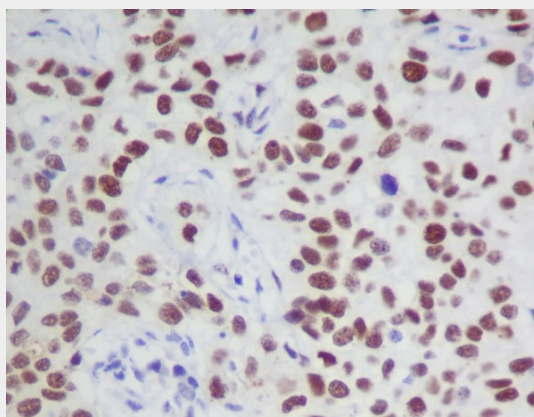
### **Anti-Phospho-JAK2 (Y1007 + Y1008) Monoclonal Antibody - Protocols**

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

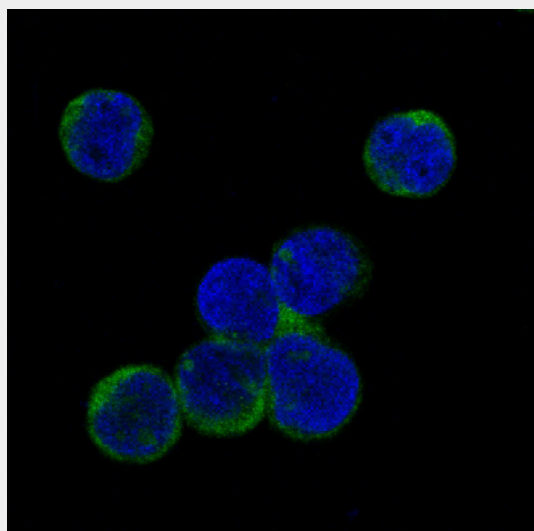
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Anti-Phospho-JAK2 (Y1007 + Y1008) Monoclonal Antibody - Images**

Western blot analysis of JAK2 phosphorylation expression in Jurkat cell lysates treated with Pervanadate.



Immunohistochemical analysis of paraffin-embedded human cervix cancer, using Phospho-JAK2 (Y1007 + Y1008) Antibody.



Immunofluorescent analysis of Jurkat cells treated with Pervanadate, using Phospho-JAK2 (Y1007 + Y1008) Antibody