

Anti-JAK2 (pY570) Antibody
Rabbit polyclonal antibody to JAK2 (pY570)
Catalog # AP59598

Specification

Anti-JAK2 (pY570) Antibody - Product Information

Application	WB
Primary Accession	O60674
Other Accession	Q62120
Reactivity	Human, Mouse, Rat, Rabbit, Monkey, Pig, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	130674

Anti-JAK2 (pY570) Antibody - Additional Information

Gene ID 3717

Other Names

Tyrosine-protein kinase JAK2; Janus kinase 2; JAK-2

Target/Specificity

Recognizes endogenous levels of JAK2 (pY570) protein.

Dilution

WB~~WB (1/500 - 1/1000)

Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

Storage

Store at -20 °C. Stable for 12 months from date of receipt

Anti-JAK2 (pY570) 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 (THPO); or type II receptors including IFN-alpha, IFN- beta, IFN-gamma and multiple interleukins (PubMed:7615558, PubMed:9657743, PubMed:<a

<http://www.uniprot.org/citations/15690087> target="_blank">15690087). 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:http://www.uniprot.org/citations/9618263 target="_blank">9618263, PubMed:http://www.uniprot.org/citations/15690087 target="_blank">15690087). 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:http://www.uniprot.org/citations/9657743 target="_blank">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:http://www.uniprot.org/citations/21368206 target="_blank">21368206). In addition, JAK2 mediates angiotensin-2-induced ARHGEF1 phosphorylation (PubMed:http://www.uniprot.org/citations/20098430 target="_blank">20098430). Plays a role in cell cycle by phosphorylating CDKN1B (PubMed:http://www.uniprot.org/citations/21423214 target="_blank">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:http://www.uniprot.org/citations/19783980 target="_blank">19783980). Up- regulates the potassium voltage-gated channel activity of KCNA3 (PubMed:http://www.uniprot.org/citations/25644777 target="_blank">25644777).

Cellular Location

Endomembrane system; Peripheral membrane protein. Cytoplasm. Nucleus

Tissue Location

Ubiquitously expressed throughout most tissues.

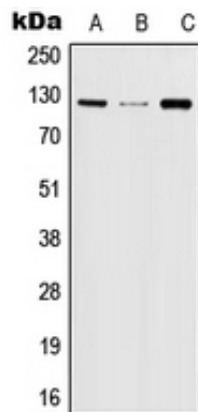
Anti-JAK2 (pY570) Antibody - Protocols

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 (pY570) Antibody - Images





Western blot analysis of JAK2 (pY570) expression in HeLa (A), TF1 (B), NIH3T3 (C), rat kidney (D) whole cell lysates.

Anti-JAK2 (pY570) Antibody - Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human JAK2. The exact sequence is proprietary.