

Datasheet for ABIN7180036
anti-JAK2 antibody (Tyr570)



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2 Images

Overview

Quantity:	100 µL
Target:	JAK2
Binding Specificity:	Tyr570
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This JAK2 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunofluorescence (IF)

Product Details

Immunogen:	Synthesized non-phosphopeptide derived from Human JAK2 around the phosphorylation site of tyrosine 570 (G-D-Y(p)-G-Q).
Isotype:	IgG
Cross-Reactivity:	Human, Mouse, Rat
Purification:	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Target Details

Target:	JAK2
Alternative Name:	JAK2 (JAK2 Products)

Target Details

Background: Background: 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. Following ligand-binding to cell surface receptors, phosphorylates specific tyrosine residues on the cytoplasmic tails of the receptor, creating docking sites for STATs proteins. 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. In addition, JAK2 mediates angiotensin-2-induced ARHGEF1 phosphorylation. Plays a role in cell cycle by phosphorylating CDKN1B. 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.

Saltzman A., Biochem. Biophys. Res. Commun. 246:627-633(1998).

Dalal I., Blood 91:844-851(1998).

Peeters P., Blood 90:2535-2540(1997)

Aliases: JAK 2 antibody, JAK-2 antibody, JAK2 antibody, JAK2_HUMAN antibody, Janus Activating Kinase 2 antibody, Janus kinase 2 (a protein tyrosine kinase) antibody, Janus kinase 2 antibody, JTK 10 antibody, JTK10 antibody, kinase Jak2 antibody, OTTHUMP00000043260 antibody, THCYT3 antibody, Tyrosine protein kinase JAK2 antibody, Tyrosine-protein kinase JAK2 antibody

UniProt: [O60674](#)

Pathways: [JAK-STAT Signaling](#), [RTK Signaling](#), [Interferon-gamma Pathway](#), [Positive Regulation of Peptide Hormone Secretion](#), [Intracellular Steroid Hormone Receptor Signaling Pathway](#), [Response to Growth Hormone Stimulus](#), [Positive Regulation of Endopeptidase Activity](#), [Protein targeting to Nucleus](#), [CXCR4-mediated Signaling Events](#), [Platelet-derived growth Factor Receptor Signaling](#), [Unfolded Protein Response](#)

Application Details

Application Notes: WB:1:500-1:3000, IF:1:100-1:500,

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: Rabbit IgG in phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.4, 150 mM NaCl, 0.02 % sodium azide and 50 % glycerol.

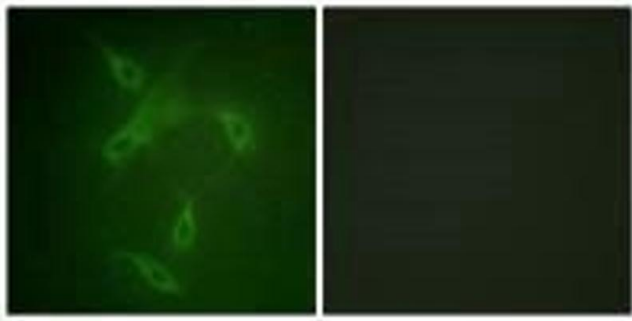
Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: -20 °C,-80 °C

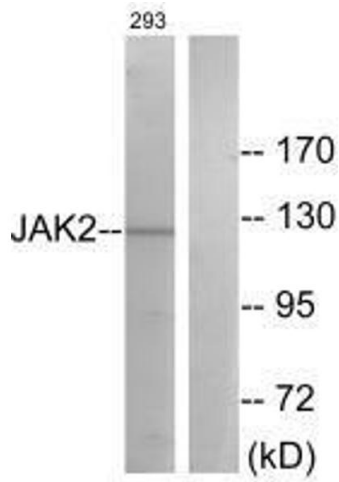
Storage Comment: Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.

Images



Immunofluorescence

Image 1. Immunofluorescence analysis of NIH/3T3 cells, using JAK2 (Ab-570) antibody.



Western Blotting

Image 2. Western blot analysis of extracts from 293 cells, treated with etoposide (25uM, 24hours), using JAK2 (Ab-570) antibody.