Rabbit JAK2 Polyclonal Antibody | anti-JAK2 antibody

Phospho-JAK2 (Tyr119) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329724	**Rabbit**	**Human, Mouse, RatPredicted Reactivity: Pig (90%), Bovine (90%), Horse (90%), Sheep (90%), Rabbit (90%), Dog (90%), Chicken (90%)**	**ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

JAK2; Polyclonal Antibody; Phospho-JAK2 (Tyr119) Antibody; JAK 2; JAK-2; JAK2_HUMAN; Janus Activating Kinase 2; Janus kinase 2 (a protein tyrosine kinase); Janus kinase 2; JTK 10; JTK10; kinase Jak2; OTTHUMP00000043260; THCYT3; Tyrosine protein kinase JAK2; Tyrosine-protein kinase JAK2; anti-JAK2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (90%), Bovine (90%), Horse (90%), Sheep (90%), Rabbit (90%), Dog (90%), Chicken (90%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-JAK2 (Tyr119) Antibody detects endogenous levels of JAK2 only when phosphorylated at Tyr119. Tissue Specificity: Ubiquitously expressed throughout most tissues.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-JAK2 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human JAK2 around the phosphorylation site of Tyr119.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Autophosphorylated, leading to regulate its activity. Leptin promotes phosphorylation on tyrosine residues, including phosphorylation on Tyr-813 (By similarity). Autophosphorylation on Tyr-119 in response to EPO down-regulates its kinase activity (By similarity). Autophosphorylation on Tyr-868, Tyr-966 and Tyr-972 in response to growth hormone (GH) are required for maximal kinase activity (By similarity). Also phosphorylated by TEC (By similarity). Phosphorylated on tyrosine residues in response to interferon gamma signaling. Phosphorylated on tyrosine residues in response to a signaling cascade that is activated by increased cellular retinol.
Subunit Structure	Interacts with EPOR, LYN, SIRPA, SH2B1 and TEC (By similarity). Interacts with IL23R. Interacts with SKB1. Interacts with STAM2. Interacts with IFNGR2 (via intracellular domain). Interacts with LEPR (Isoform B) (By similarity). Interacts with HSP90AB1; promotes functional activation in a heat shock-dependent manner. Interacts with STRA6. Interacts with RHEX; this interaction occurs in a erythropoietin (EPO)-dependent manner.
Similarity	Possesses 2 protein kinase domains. The second one probably contains the catalytic domain, while the presence of slight differences suggest a different role for protein kinase 1 (By similarity).Belongs to the protein kinase superfamily. Tyr protein kinase family. JAK subfamily.
Subcellular Location	Endomembrane system>Peripheral membrane protein. Cytoplasm. Nucleus.

Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

Application Data
At 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

IHC (Immunohistochemistry)
At 1/200 staining Human kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.

IHC (Immunohistochemisry)
At 1/200 staining Mouse kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.

IHC (Immunohiostchemistry)
Staining Rat spleen tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.

WB (Western Blot)
Western blot analysis of JAK2 (Phospho-Tyr119) using 293 whole cell lysates.-/+ means absence or presence of N peptideï¼ˆnon-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-JAK2 antibody	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. Part of a signaling cascade that is activated by increased cellular retinol and that leads to the activation of STAT5 (STAT5A or STAT5B). 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.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4826776
NCBI GeneID	3717
NCBI Accession #	NP_004963.1
NCBI GenBank Nucleotide #	NM_004972.3

UniProt Accession #	O60674; O14636; O75297
Molecular Weight	130,674 Da
NCBI Official Full Name	tyrosine-protein kinase JAK2
NCBI Official Synonym Full Names	Janus kinase 2
NCBI Official Symbol	JAK2
NCBI Official Synonym Symbols	JTK10; THCYT3
NCBI Protein Information	tyrosine-protein kinase JAK2; JAK-2; Janus kinase 2 (a protein tyrosine kinase)
UniProt Protein Name	Tyrosine-protein kinase JAK2
UniProt Gene Name	**JAK2**
UniProt Synonym Gene Names	JAK-2
UniProt Entry Name	JAK2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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