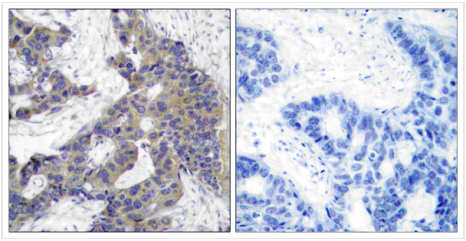
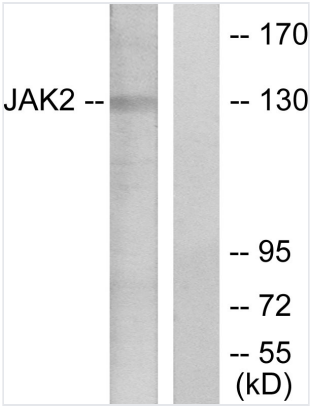
JAK2 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	JAK2, Polyclonal Antibody
Full Product Name	JAK2 Antibody
Product Gene Name	anti-JAK2 antibody
Product Synonym Names	JAK-2; JAK2; Janus kinase 2; kinase Jak2
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	Purified from rabbit antiserum by affinity-chromatography using immunogen.
Concentration	1 mg/ml (lot specific)
Specificity	JAK2 Antibody detects endogenous levels of total JAK2 protein.
Preparation and Storage	Stable at -20 degree C for at least 1 year.
Molecular Weight	130 kDa
OMIM	AF058925 mRNA
3D Structure	ModBase 3D Structure for O60674
Target Modification	Unmodified/Total
Immunogen	The antiserum was produced against synthesized peptide derived from human JAK2.
Immunogen Range	981-1030
Applications Tested/Suitable for anti-JAK2 antibody	Western Blot (WB), Immunohistochemistry (IHC), ELISA (EIA)
Application Notes for anti-JAK2 antibody	WB: 1:500~1:1000 IHC: 1:50~1:100 ELISA: 1:10000
Related Product Information for anti-JAK2 antibody	MBS9504178 is an antibody targeting JAK2. Also known as JAK2 Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.
Other Notes	Small volumes of anti-JAK2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Immunohistochemistry (IHC) of anti-JAK2 antibody
Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue, using JAK2 Antibody. The picture on the right is blocked with the synthesized peptide.



Western Blot (WB) of anti-JAK2 antibody
Western blot analysis of lysates from HT-29 cells, using JAK2 Antibody. The lane on the right is blocked with the synthesized peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for JAK2. It may not necessarily be applicable to this product.

NCBI GI #	1015809690
NCBI GeneID	3717
NCBI Accession #	NP_001309123.1
UniProt Primary Accession #	O60674
UniProt Secondary Accession #	O14636; O75297
UniProt Related Accession #	O60674
GenBank Nucleotide #	NM_001322194.1
NCBI Official Full Name	tyrosine-protein kinase JAK2 isoform a
NCBI Official Synonym Full Names	Janus kinase 2
NCBI Official Symbol	JAK2
NCBI Official Synonym Symbols	JTK10; THCYT3
UniProt Protein Name	Tyrosine-protein kinase JAK2
UniProt Synonym Protein Names	Janus kinase 2; JAK-2
Protein Family	Tyrosine-protein kinase
UniProt Gene Name	JAK2
UniProt Synonym Gene Names	JAK-2
NCBI Protein Information	tyrosine-protein kinase JAK2
NCBI Summary for JAK2	This gene product is a protein tyrosine kinase involved in a specific subset of cytokine receptor signaling pathways. It has been found to be constituitively associated with the prolactin receptor and is required for responses to gamma interferon. Mice that do not express an active protein for this gene exhibit embryonic lethality associated with the absence of definitive erythropoiesis. [provided by RefSeq, Jul 2008]

UniProt Comments for JAK2	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). 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: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. 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). In addition, JAK2 mediates angiotensin-2-induced ARHGEF1 phosphorylation (PubMed:20098430). Plays a role in cell cycle by phosphorylating CDKN1B (PubMed: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).
Research Articles on JAK2	**1.** Food intake had minimal impact on the pharmacokinetics of JAK2 inhibitor fedratinib. The tolerability of this drug was improved when taken following a high-fat breakfast.
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