# JAK2 Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | JAK2, Polyclonal Antibody |
| **Full Product Name** | JAK2 Antibody |
| **Product Gene Name** | anti-JAK2 antibody |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human, Mouse, Rat |
| **Purity/Purification** | Affinity Purified. Immobilized antigen affinity chromatography |
| **Concentration** | 0.5ug/ul in antibody stabilization buffer (lot specific) |
| **Preparation and Storage** | Store at -20 degree C for long term storage |
| **Molecular Weight** | 130,674 Da |
| **Chromosome Location** | Chromosome: 9; NC_000009.11 (4985245..5128183). Location: 9p24 |
| **OMIM** | 147796 |
| **3D Structure** | ModBase 3D Structure for O60674 |
| **Immunogen** | Synthetic peptide taken within amino acid region 980-1030 on human JAK2 protein. |
| **Conjugation** | Unconjugated |
| **Applications Tested/Suitable for anti-JAK2 antibody** | ELISA (EIA), Immunoprecipitation (IP), Western Blot (WB) |
| **Related Product Information for anti-JAK2 antibody** | MBS5401150 is an antibody targeting JAK2. Also known as JAK2 Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit. Affinity Purified Tyrosine-protein kinase JAK2 Antibody |
| **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. |

## ADDITIONAL DETAILS

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

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| **NCBI GI #** | 4826776 |
| **NCBI GeneID** | 3717 |
| **NCBI Accession #** | NP_004963.1 |
| **UniProt Primary Accession #** | O60674 |
| **UniProt Secondary Accession #** | O14636; O75297 |
| **UniProt Related Accession #** | O60674 |
| **GenBank Nucleotide #** | NM_004972.3 |
| **NCBI Official Full Name** | tyrosine-protein kinase JAK2 |

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| **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 |
| **Protein Family** | Tyrosine-protein kinase |
| **UniProt Gene Name** | JAK2 |
| **UniProt Synonym Gene Names** | JAK-2 |
| **UniProt Entry Name** | JAK2_HUMAN |
| **NCBI Protein Information** | tyrosine-protein kinase JAK2; JAK-2; Janus kinase 2 (a protein tyrosine kinase) |
| **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] |

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| **UniProt Comments for JAK2** | JAK2: a non-receptor tyrosine-kinase involved in a specific subset of cytokine receptor signaling pathways, including IL-3, -5 and GM-CSF. Interacts with IL23R, SKB1 and STAM2. It has been found to be constitutively 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. Fusion of Jak2 to TEL1 (ETV6) by t(9;12)(p24;p13) causes myeloproliferative disease in humans and mouse models. The Jak inhibitor AG490 inhibits constitutive Jak2 phosphorylation and causes apoptosis in cells from breast cancer and relapsing acute lymphoblastic leukemia. A single activating mutation is associated with several hematological malignancies. Inhibitor: AG490.<br><br>Protein type: Protein kinase, TK; Kinase, protein; Protein kinase, tyrosine (non-receptor); EC 2.7.10.2; Oncoprotein; TK group; JakA family<br><br>Chromosomal Location of Human Ortholog: 9p24<br><br>Cellular Component: nucleoplasm; extrinsic to internal side of plasma membrane; cytoskeleton; nuclear matrix; cytoplasm; caveola; nucleus; cytosol; lipid raft<br><br>Molecular Function: protein C-terminus binding; histone binding; non-membrane spanning protein tyrosine kinase activity; acetylcholine receptor binding; protein kinase binding; protein kinase activity; interleukin-12 receptor binding; protein binding; growth hormone receptor binding; peptide hormone receptor binding; insulin receptor substrate binding; protein-tyrosine kinase activity; heme binding; phosphoinositide 3-kinase binding; type 1 angiotensin receptor binding; SH2 domain binding; ATP binding; receptor binding<br><br>Biological Process: establishment and/or maintenance of chromatin architecture; positive regulation of nitric oxide biosynthetic process; activation of MAPKK activity; tyrosine phosphorylation of Stat3 protein; response to lipopolysaccharide; tyrosine phosphorylation of JAK2 protein; protein amino acid phosphorylation; enzyme linked receptor protein signaling pathway; positive regulation of tyrosine phosphorylation of Stat3 protein; regulation of apoptosis; response to antibiotic; elevation of cytosolic calcium ion concentration; tumor necrosis factor-mediated signaling pathway; erythrocyte differentiation; mesoderm development; negative regulation of neuron apoptosis; positive regulation of cell activation; positive regulation of DNA binding; positive regulation of protein import into nucleus, translocation; axon regeneration; positive regulation of insulin secretion; JAK-STAT cascade; positive regulation of tumor necrosis factor production; tyrosine phosphorylation of Stat5 protein; positive regulation of phosphoinositide 3-kinase cascade; tyrosine phosphorylation of STAT protein; positive regulation of peptidyl-tyrosine phosphorylation; response to hydroperoxide; mineralocorticoid receptor signaling pathway; tyrosine phosphorylation of Stat1 protein; positive regulation of transcription from RNA polymerase II promoter; positive regulation of transcription factor activity; positive regulation of cell differentiation; positive regulation of nitric-oxide synthase biosynthetic process; positive regulation of phosphoprotein phosphatase activity; peptidyl-tyrosine phosphorylation; hormone-mediated signaling; negative regulation of heart contraction; apoptosis; protein amino acid autophosphorylation; platelet-derived growth factor receptor signaling pathway; signal transduction; host programmed cell death induced by symbiont; negative regulation of cell proliferation; actin filament polymerization; positive regulation of cell proliferation; cell differentiation; STAT protein nuclear translocation; caspase activation; cell migration; cytokine and chemokine mediated signaling pathway; negative regulation of DNA binding; regulation of cell proliferation; positive regulation of interleukin-1 beta production; G-protein coupled receptor protein signaling pathway; positive regulation of tyrosine phosphorylation of Stat5 protein; regulation of inflammatory response; innate immune response; negative regulation of cell-cell adhesion; cell motility; blood coagulation; induction of apoptosis by oxidative stress; positive regulation of cell migration; positive regulation of inflammatory response<br><br>Disease: Polycythemia Vera; Myelofibrosis; Budd-chiari Syndrome; Erythrocytosis, Familial, 1; Thrombocythemia 3 |
| **Research Articles on JAK2** | **1.** JAK2 rs2203724 was not associated with idiopathic recurrent miscarriage among Bahraini and Tunisian Arabs. |
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