

Recombinant Human Janus Kinase 2, GST-His-tagged

Cat. No. JAK2-5441H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human JAK2, containing the catalytic and the pseudo kinase domain (aa 532-1132), with N-terminal GST-His Tag.
Species	Human
Source	Sf9 Cells
Protein Length	532-1132 a.a.
Description	JAK2 is a member of intracellular non-receptor tyrosine kinases that transduce cytokine-mediated signals via the JAK-STAT pathway. JAK2 has two near-identical phosphatase-transferring domains. One domain exhibits the kinase activity while the other stabilizes the JAK conformational structure. JAK2 is the predominant JAK kinase activated in response to several growth factors and cytokines such as IL-3, GM-CSF and erythropoietin. JAK2 has been found to be constitutively associated with the prolactin receptor and is required for responses to gamma interferon.
Form	Liquid in 25 mM Tris-HCl, pH 8.0 + 100 mM NaCl + 0.05% Tween-20 + 50% glycerol + 3 mM DTT.
Molecular Weight	99 kDa
Specific Activity	0.2 U/μg. One unit is defined as the amount of enzyme that will phosphorylate 1 nmol of tyrosine substrate per minute at pH 7.4 and 30°C. Assay buffer: 50 mM HEPES, pH 7.4 + 3 mM MgCl ₂ + 3 mM MnCl ₂ + 1 mM DTT + 3 μM Na-orthovanadate + 0.5 mM

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ATP + 30g/ml Poly (Glu:Tyr) 4:1 substrate + 10 g/ml recombinant JAK2.

Storage Stable for 6 months in working aliquots at -80°C. Avoid repeated freeze-thaw cycles.

Official Symbol JAK2

GENE INFORMATION

Gene Name [JAK2 Janus kinase 2 \[Homosapiens \]](#)

Synonyms JAK2; Janus kinase 2; JTK10; tyrosine-protein kinase JAK2; Janus kinase 2 (a protein tyrosine kinase); EC2.7.10.2; JAK-2; OTTHUMP00000021024; OTTHUMP00000043260

Gene ID [3717](#)

mRNA Refseq [NM_004972](#)

Protein Refseq [NP_004963](#)

MIM [147796](#)

UniProt ID O60674

Chromosome Location 9p24

Pathway Adipocytokine signaling pathway; CXCR4-mediated signaling events; Chemokine signaling pathway; Cholinergic synapse; Delta-Notch Signaling Pathway; EGFR1 Signaling Pathway; EPO Receptor Signaling; ErbB2/ErbB3 signaling events; ErbB4 signaling events; Growth hormone receptor signaling; Herpes simplex infection; IFN-

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gamma pathway; IL-2 Signaling Pathway; Immune System

Function

ATP binding; Janus kinase activity; SH2 domain binding; acetylcholine receptor binding; growth hormone receptor binding; insulin receptor substrate binding; interleukin-12 receptor binding; non-membrane spanning protein tyrosine kinase activity; nucleotide binding; peptide hormone receptor binding; phosphoinositide 3-kinase binding; transferase activity

**PDB rendering based
on 2b7a.**

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