

## Recombinant Human Janus Kinase 2, GST-His-tagged

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

### SPECIFICATION

<b>Product Overview</b>	Recombinant human JAK2, containing the catalytic and the pseudo kinase domain (aa 532-1132), with N-terminal GST-His Tag.
<b>Species</b>	Human
<b>Source</b>	Sf9 Cells
<b>Protein Length</b>	532-1132 a.a.
<b>Description</b>	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.
<b>Form</b>	Liquid in 25 mM Tris-HCl, pH 8.0 + 100 mM NaCl + 0.05% Tween-20 + 50% glycerol + 3 mM DTT.
<b>Molecular Weight</b>	99 kDa
<b>Specific Activity</b>	0.2 U/g. 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 <sub>2</sub> + 3 mM MnCl <sub>2</sub> + 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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