

## JAK2

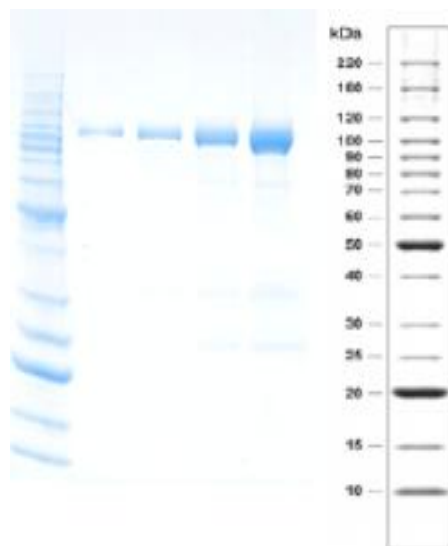
# Recombinant Human Janus Kinase 2 (aa 532-1132) GST-tag, Active

<b>Catalog No.</b>	CSI10289	<b>Quantity:</b>	10 µg
<b>Alternate Names:</b>	Janus Kinase 2, THCYT3, JKT10		
<b>Description:</b>	Recombinant protein JAK2 JH1 JH2 represents the catalytic and pseudokinase domain (amino acids 532-1132) of human JAK2 fused with a GST tag. Activated <i>in vitro</i> via auto-phosphorylation.		
	JAK2 is a protein tyrosine kinase involved in a specific subset of cytokine receptor signaling pathways. It has been found to be constitutively associated with the prolactin receptor and is required for responses to IFN $\gamma$ . JAK2 is often misregulated or mutated in a number of myeloproliferative diseases and cancer.		
<b>UniProt ID:</b>	O60674		
<b>Gene ID:</b>	3717		
<b>Source:</b>	Insect cells		
<b>Molecular Weight:</b>	97.8 kDa		
<b>Formulation:</b>	50 mM Tris, pH 7.5, 150 mM NaCl, 0.5 mM EDTA, 0.02% Triton X-100, 2 mM DTT, 50% glycerol		
<b>Purity:</b>	85% by Coomassie blue stained SDS-PAGE		
<b>Concentration:</b>	<b>Lot Specific, example:</b> <b>0.21 mg/ml</b> , total protein measured by Bradford assay <b>2.15 µM</b> , calculated molarity		
<b>Identity:</b>	JAK2 JH1 JH2 was subjected to proteolytic digest followed by mass spectrometry analysis. The resulting MS/MS data verified JAK2 JH1 JH2 identity by comparison against the amino acid sequence of the recombinant protein.		
<b>Specific Activity:</b>	160 nmoles of phosphate transferred to AXLtide peptide substrate per minute per mg of total protein at 30°C Activity determined at a final protein concentration of 2.08 µg/ml		
<b>Assay Conditions:</b>	<b>Dilution Buffer (for Assay purpose only):</b> 20 mM Tris (pH 7.5), 0.02% Triton X-100, 0.1 mg/mL BSA, 2 mM DTT, 0.5 mM Na <sub>3</sub> VO <sub>4</sub> and 10% Glycerol.		

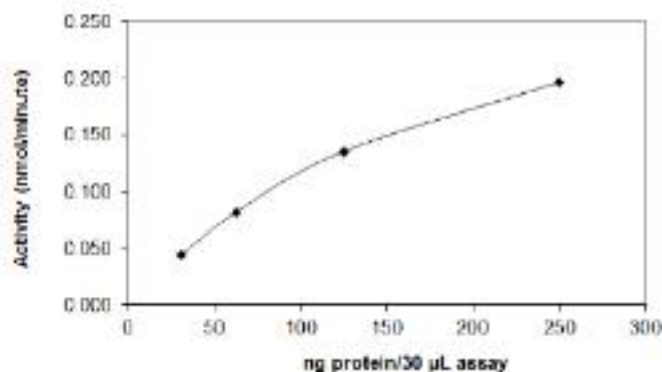
**Recommended Assay Conditions: Centrifuge vial prior to use for maximal recovery.** Dilute kinase, ONLY ENOUGH FOR ASSAY, in Dilution Buffer to desired concentration. Assay in 25 mM HEPES (pH 7.5), 10 mM MgCl<sub>2</sub>, 0.5 mM EGTA, 0.5 mM Na<sub>3</sub>VO<sub>4</sub>, 5 mM  $\beta$ -glycerophosphate, 2.5 mM DTT, 0.01% Triton X-100, 200 µM ATP, 200 µg/mL AXLtide peptide substrate (KKSRGDYMTMQIG) and trace [<sup>32</sup>P]- $\gamma$ -ATP for 10 minutes at 30 °C.

**Storage & Stability:** Store **UNDILUTED** kinase in working aliquots  $\geq 20 \mu\text{L}$  at  $-80^\circ\text{C}$  for up to 6 months.  
**Avoid repeated freeze-thaw cycles. Kinase must be stored undiluted, as supplied.**

SDS-PAGE analysis of Recombinant JAK2 (aa 532-1132) GST-tagged, active. 0.4, 0.8, 2.0, and 4.0  $\mu\text{g}$  of JAK2 protein were loaded on gel.



Activity profile of Recombinant JAK2 (aa 532-1132) GST-tagged under recommended conditions.



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