

# Recombinant Human Janus kinase 1 Protein, His-tagged

Cat. No. JAK1-07H Lot. No. (See product label)

## SPECIFICATION

**Product Overview** Recombinant human JAK1 (janus kinase 1), encompassing amino acids 561-852 that correspond to the JH2 pseudokinase domain). This construct contains an N-terminal 6xHis. This protein was affinity purified.

**Species** Human

**Source** Sf9 Cells

**ProteinLength** 561-852

**Description** Janus kinases (JAKs) are a family of intracellular non-receptor tyrosine kinases, including JAK1, JAK2, JAK3 and TYK2 (tyrosine kinase 2), important in the modulation of inflammatory processes. JAKs contain a catalytically inactive pseudokinase regulatory domain (JH2), that acts as a negative regulator, as well as an active kinase domain (JH1). Most of the mutations in JAK proteins that link to hematological and immune-related diseases occur in the JH2 domain, resulting in increased JAK2 activity or decreased cytokine-induced signaling. Most inhibitors developed so far target the JH1 domain and seem unable to fully treat the disease, while generating significant side effects by suppressing normal cytokine signaling. Recent reports demonstrate that the pseudokinase domain of JH2 could provide an ideal site for selective inhibitor development and support the treatment of diseases like myeloproliferative neoplasms (MNPs), while generating minimal side effects. The development of such inhibitors will open new avenues in cancer therapy.

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<b>Tag</b>	N-6xHis
<b>Form</b>	Aqueous buffer solution
<b>Molecular Mass</b>	35 kDa
<b>Purity</b>	≥90%
<b>Applications</b>	Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.
<b>Notes</b>	Avoid freeze/thaw cycles
<b>Usage</b>	Thaw on ice and gently mix prior to use. DO NOT VORTEX. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles.
<b>Storage</b>	At least 6 months at -80 centigrade.
<b>Storage Buffer</b>	40 mM Tris-HCl, pH 8.0, 110 mM NaCl, 2.2 mM KCl, 0.04% Tween-20, and 20% glycerol
<b>Shipping</b>	At -80 centigrade

## GENE INFORMATION

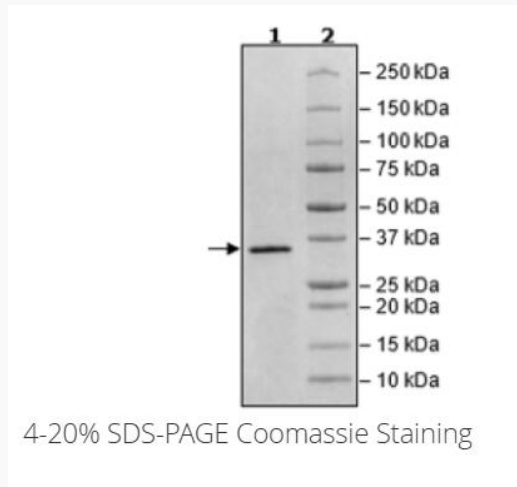
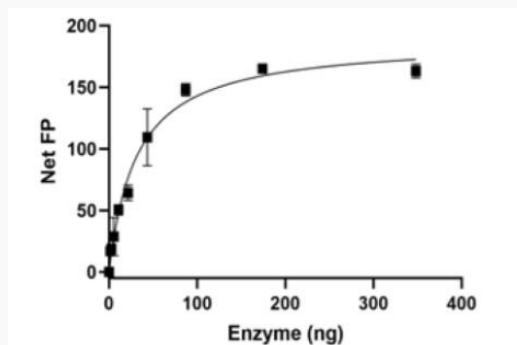
<b>Gene Name</b>	JAK1 Janus kinase 1 [ Homo sapiens (human) ]
<b>Official Symbol</b>	JAK1
<b>Synonyms</b>	JAK1; Janus kinase 1; JTK3; AIIDE; JAK1A; JAK1B; tyrosine-protein kinase JAK1; EC 2.7.10.2

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<b>Gene ID</b>	3716
<b>mRNA Refseq</b>	NM_002227
<b>Protein Refseq</b>	NP_002218
<b>MIM</b>	147795
<b>UniProt ID</b>	P23458

**SDS-PAGE**

**Activity**


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