

Recombinant Human JAK2 (V617F) (JH1, JH2 Domain) Protein, GST/Avi-tagged, Biotin-labeled

Cat. No. JAK2-24H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Human Jak2 containing the catalytic and the pseudo kinase domain, also known as Janus kinase-2, Just Another Kinase 2, Jak-2-JH1 and JH2, GenBank Accession No. NM_004972, a.a. 513-1132(end), with V617F mutation; with N-terminal GST-Tag and C-terminal Avi-Tag, co-expressed with PTP1B for dephosphorylation in HEK293 expression system. This protein is enzymatically Biotin-labeled using Avi-Tag™ technology. Biotinylation is confirmed to be ≥90%.
Species	Human
Source	HEK293
ProteinLength	513-1132
Description	This gene encodes a non-receptor tyrosine kinase that plays a central role in cytokine and growth factor signalling. The primary isoform of this protein has an N-terminal FERM domain that is required for erythropoietin receptor association, an SH2 domain that binds STAT transcription factors, a pseudokinase domain and a C-terminal tyrosine kinase domain. Cytokine binding induces autophosphorylation and activation of this kinase. This kinase then recruits and phosphorylates signal transducer and activator of transcription (STAT) proteins. Growth factors like TGF-beta 1 also induce phosphorylation and activation of this kinase and translocation of downstream STAT proteins to the nucleus where they influence gene transcription. Mutations in this gene are associated with numerous inflammatory diseases and malignancies. This

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

gene is a downstream target of the pleiotropic cytokine IL6 that is produced by B cells, T cells, dendritic cells and macrophages to produce an immune response or inflammation. Disregulation of the IL6/JAK2/STAT3 signalling pathways produces increased cellular proliferation and myeloproliferative neoplasms of hematopoietic stem cells. A nonsynonymous mutation in the pseudokinase domain of this gene disrupts the domains inhibitory effect and results in constitutive tyrosine phosphorylation activity and hypersensitivity to cytokine signalling. This gene and the IL6/JAK2/STAT3 signalling pathway is a therapeutic target for the treatment of excessive inflammatory responses to viral infections. Alternative splicing results in multiple transcript variants encoding distinct isoforms.

Form	Aqueous buffer solution
Molecular Mass	100 kDa
Usage	Assay was performed according to the TYR Phosphorylation Assay Kit, with both phosphorylated JAK2 (standard) and JAK2 titrated from 500 ng to 0 ng.
Storage	At least 6 months at –80 centigrade. Storing diluted enzyme is not recommended, if necessary, use carrier protein (BSA 0.1-0.5%).
Concentration	0.2 mg/mL
Storage Buffer	40 mM Tris-HCl, pH 8.0, 110 mM NaCl, 2.2 mM KCl, 0.04% Tween-20, 16 mM Glutathione, 3 mM DTT, 20% glycerol.
Conjugation	Biotin

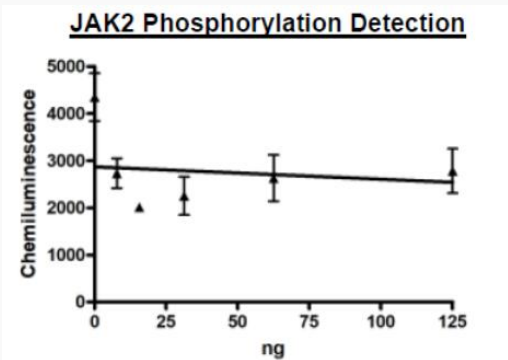
GENE INFORMATION

Gene Name [JAK2 Janus kinase 2 \[Homo sapiens \(human\) \]](#)

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Official Symbol	JAK2
Synonyms	JAK2; Janus kinase 2; JTK10; tyrosine-protein kinase JAK2; JAK-2; Janus kinase 2 (a protein tyrosine kinase); EC 2.7.10.2; jak; jh1
Gene ID	3717
mRNA Refseq	NM_004972
Protein Refseq	NP_004963
MIM	147796
UniProt ID	O60674
SDS-PAGE	JAK2 Phosphorylation Detection  JAK2 Phosphorylation Detection

SDS-PAGE

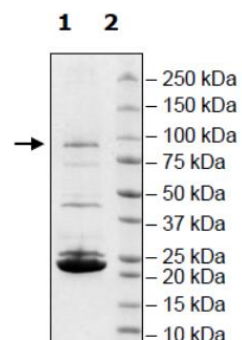
4-20% SDS-PAGE Coomassie staining

Lane 1:
JAK2

Lane 2:
Protein Marker

Purity: ≥8%

MW: 100 kDa



Tel: 1-631-559-9269 1-516-512-3133

Email: info@creative-biomart.com Fax: 1-631-938-8127

45-1 Ramsey Road, Shirley, NY 11967, USA