



[Go to Product page](#)

Datasheet for ABIN5709779

## JAK2 Protein (AA 752-1132, partial) (His tag)

### 1 Image

#### Overview

Quantity:	100 µg
Target:	JAK2
Protein Characteristics:	AA 752-1132, partial
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This JAK2 protein is labelled with His tag.
Application:	SDS-PAGE (SDS)

#### Product Details

Sequence:	KPLSALDSQR KLQFYEDRHQ LPAPKWAELA NLINNCMDYE PDFRPSFRAI IRDLNSLFTP DYELLTENDM LPNMRIGALG FSGAFEDRDP TQFEERHLKF LQQLGKGNFG SVEMCRYDPL QDNTGEVVAV KKLQHSTEEH LRDFEREIEI LKSLQHDNIV KYKGVCSYAG RRNLKLIMEY LPYGLRDYL QKHKERIDHI KLLQYTSQIC KGMEYLGTKR YIHRDLATRN ILVENENRVK IGDFGLTKVL PQDKEYYKVK EPGESPIFWY APESLTESKF SVASDVWSFG VVLYELFTYI EKSKSPPAEF MRMIGNDKQG QMIVFHLEL LKNNGRLLPRP DGCPDEIYMI MTECWNNNVN QRPSFRDLAL RVDQIRDNMA G
Purification:	SDS-PAGE
Purity:	> 90 %

## Target Details

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Target: JAK2

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Alternative Name: JAK2 ([JAK2 Products](#))

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Background: Non-receptor tyrosine kinase involved in various processes such as cell growth, development, differentiation or histone modifications. Mediates essential signaling events in both innate and adaptive immunity. In the cytoplasm, plays a pivotal role in signal transduction via its association with type I receptors such as growth hormone (GHR), prolactin (PRLR), leptin (LEPR), erythropoietin (EPOR), thrombopoietin (THPO), or type II receptors including IFN-alpha, IFN-beta, IFN-gamma and multiple interleukins. Following ligand-binding to cell surface receptors, phosphorylates specific tyrosine residues on the cytoplasmic tails of the receptor, creating docking sites for STATs proteins. Subsequently, phosphorylates the STATs proteins once they are recruited to the receptor. Phosphorylated STATs then form homodimer or heterodimers and translocate to the nucleus to activate gene transcription. For example, cell stimulation with erythropoietin (EPO) during erythropoiesis leads to JAK2 autophosphorylation, activation, and its association with erythropoietin receptor (EPOR) that becomes phosphorylated in its cytoplasmic domain. Then, STAT5 (STAT5A or STAT5B) is recruited, phosphorylated and activated by JAK2. Once activated, dimerized STAT5 translocates into the nucleus and promotes the transcription of several essential genes involved in the modulation of erythropoiesis. In addition, JAK2 mediates angiotensin-2-induced ARHGEF1 phosphorylation. Plays a role in cell cycle by phosphorylating CDKN1B. Cooperates with TEC through reciprocal phosphorylation to mediate cytokine-driven activation of FOS transcription. In the nucleus, plays a key role in chromatin by specifically mediating phosphorylation of 'Tyr-41' of histone H3 (H3Y41ph), a specific tag that promotes exclusion of CBX5 (HP1 alpha) from chromatin.

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Molecular Weight: 48.7 kDa

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UniProt: [O60674](#)

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Pathways: [JAK-STAT Signaling](#), [RTK Signaling](#), [Interferon-gamma Pathway](#), [Positive Regulation of Peptide Hormone Secretion](#), [Intracellular Steroid Hormone Receptor Signaling Pathway](#), [Response to Growth Hormone Stimulus](#), [Positive Regulation of Endopeptidase Activity](#), [Protein targeting to Nucleus](#), [CXCR4-mediated Signaling Events](#), [Platelet-derived growth Factor Receptor Signaling](#), [Unfolded Protein Response](#)

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## Application Details

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Application Notes: Optimal working dilution should be determined by the investigator.

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Restrictions: For Research Use only

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## Handling

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Format:	Liquid
Concentration:	0.1-2 mg/mL
Buffer:	20 mM Tris-HCl based buffer, pH 8.0
Storage:	-80 °C,4 °C,-20 °C
Storage Comment:	Store at -20°C, for extended storage, conserve at -20°C or -80°C. Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

## Images

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### SDS-PAGE

Image 1.