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# Recombinant Human Janus kinase 3/JAK3 Kinase

**Catalog No.: RP03410LQ** Recombinant

## Sequence Information

| Species | Gene ID | Swiss Prot |
|---|---|---|
| Human | 3718 | P52333 |

**Tags**
N-GST

**Synonyms**
JAK3; JAK-3; Janus kinase 3; L-JAK; Leukocyte janus kinase; Tyrosine-protein kinase JAK3

## Product Information

| Source | Purification |
|---|---|
| Baculovirus-Insect Cells | ≥ 85% as determined by SDS-PAGE;≥ 85% as determined by HPLC. |

| Calculated MW | Observed MW |
|---|---|
| 65.4 kDa | 55-70 kDa |

**Endotoxin**
< 1 EU/μg of the protein by LAL method.

**Formulation**
Supplied as a 0.22 μm filtered solution in 50 mM Tris-HCl, 150 mM NaCl, 5% glycerol, 5 mM DTT, 0.1 M Trehalose. (pH 7.5). Contact us for customized product form or formulation.

**Reconstitution**
Please use running water to thaw it quickly.

## Contact


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## Background

Tyrosine-protein kinase JAK3 is a tyrosine kinase enzyme that in humans is encoded by the JAK3 gene. JAK3 belongs to the janus family of kinases. Other members of the Janus family include JAK1, JAK2 and TYK2. As JAK3 is expressed in hematopoietic and epithelial cells, its role in cytokine signaling is thought to be more restricted than other JAKs. It is most commonly expressed in T cells and NK cells, but has also been found in intestinal epithelial cells. JAK3 is involved in signal transduction by receptors that employ the common gamma chain (γc) of the type I cytokine receptor family (e.g. IL-2R, IL-4R, IL-7R, IL-9R, IL-15R, and IL-21R). Mutations that abrogate Janus kinase 3 function cause an autosomal SCID (severe combined immunodeficiency disease), while activating Janus kinase 3 mutations lead to the development of leukemia. In addition to its well-known roles in T cells and NK cells, JAK3 has been found to mediate IL-8 stimulation in human neutrophils. IL-8 primarily functions to induce chemotaxis in neutrophils and lymphocytes, and JAK3 silencing severely inhibits IL-8-mediated chemotaxis.

## Basic Information

**Description**
Recombinant Human Janus kinase 3/JAK3 Kinase is produced by Baculovirus-Insect Cells expression system. The target protein is expressed with sequence (Ile781-Ser1124) of Human JAK3 (Accession #P52333) fused with a N-GST tag.

**Bio-Activity**
The activity of JAK3 is based on the MSA technology, and the content and ratio of the substrate and the product are directly separated and detected in real time and dynamically by the different migration rates of the substrate and the product after the enzymatic reaction.

**Shipping**
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Storage**
Store at -70°C. This product is stable at ≤ -70°C for up to 1 year from the date of receipt. For optimal storage, aliquot into smaller quantities after centrifugation and store at recommended temperature.
Aliquots below 10 μL are not advisable. Product must not be stored in diluted solutions. Avoid repeated freeze-thaw cycles.
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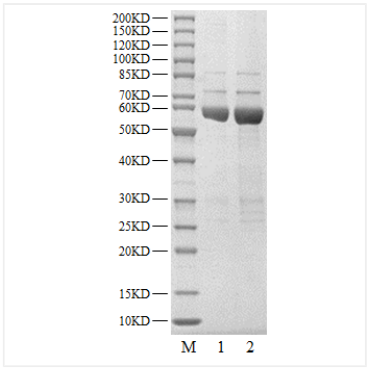
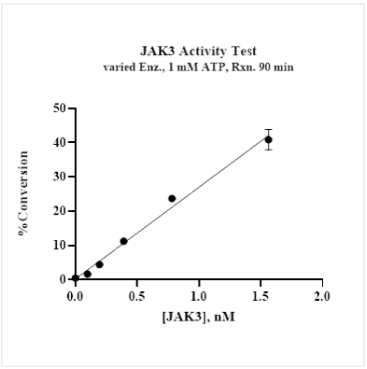
**Operational Notes**
For your safety and health, please wear a lab coat and disposable gloves for handling.

## Validation Data




Recombinant Human Janus kinase 3/JAK3 Kinase was resolved with SDS-PAGE under reducing (Lane 1) and non-reducing (Lane 2) conditions.

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