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Produktinformation



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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION



JAK1 (human, recombinant)

Item No. 33741

Overview and Properties

Synonyms: Janus-Associated Kinase 1, JTK3, Tyrosine-Protein Kinase JAK1
Source: Active recombinant human N-terminal GST-tagged JAK1 expressed in insect cells
Amino Acids: 866-1,154
Uniprot No.: P23458
Molecular Weight: 60 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: *batch specific* (≥63% estimated by SDS-PAGE)
Supplied in: 25 mM Tris-HCl, pH 8.0, with 427 mM NaCl, 1.3 mM KCl, 0.02% Tween 20, 3 mM DTT, 14 mM glutathione, and 50% glycerol

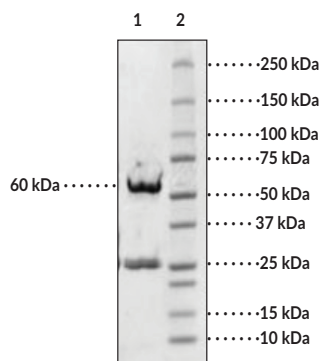
Protein

Concentration: *batch specific* mg/ml

Bioactivity: See figures for details

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

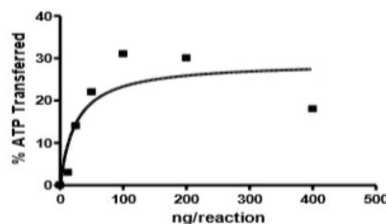
Images



Lane 1: JAK1 (4 μg)
Lane 2: MW Markers

SDS-PAGE Analysis of JAK1.

Representative gel image shown; actual purity may vary between each batch.



Kinase activity confirmed by ADP detection assay using 3 mM DTT, 20 μM ATP, and 0.1 mg/ml IRS-1-derived peptide substrate.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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PRODUCT INFORMATION



Description

JAK1 is a non-receptor tyrosine kinase that has roles in immune signaling.¹⁻³ It is composed of N-terminal FERM and SH2 domains, a regulatory pseudokinase domain, and a C-terminal kinase domain.² It is widely expressed and associates with class I and class II cytokine receptors at the plasma membrane.³ Activation of these cytokine receptors activates JAK1 and induces its dimerization and kinase activity, leading to JAK1 phosphorylation of STAT transcription factors and transcription of immune-related target genes.^{2,4} JAK1 signaling is inhibited by the suppressor of cytokine signaling (SOCS) proteins SOCS-1, SOCS-3, and SOCS-5.^{5,6} Knockout of *Jak1* in mice results in perinatal mortality and deficits in lymphopoiesis.⁷ JAK1 fusion proteins and activating mutations in *JAK1* are associated with acute myeloid leukemia (AML) and T cell precursor acute lymphoblastic leukemia (ALL).⁸ Cayman's JAK1 (human, recombinant) protein can be used for enzyme activity assays.

References

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