

Product datasheet

Recombinant human JAK3 protein (Active) ab89982

[2 Images](#)

Description

Product name	Recombinant human JAK3 protein (Active)
Biological activity	Specific Activity: 500 pmol/min/μg. Assay conditions: 40 mM Tris-HCL pH 7.4, 20 mM MgCl ₂ , 0.1 mg/mL BSA and 0.2 mM DTT using 0.2 mg/ml Poly-(Glu4:Tyr) substrate and 20 mM ATP. Reaction was done at 30°C for 45 min.
Purity	>= 90 % SDS-PAGE. Affinity purified.
Expression system	Baculovirus infected insect cells
Accession	<u>P52333</u>
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Actual molecular weight	37 kDa including tags
Amino acids	811 to 1124
Tags	His tag N-Terminus
Additional sequence information	NM_000215. N-terminal 10x His tag.

Specifications

Our **Abpromise guarantee** covers the use of **ab89982** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies SDS-PAGE
Form	Liquid

Preparation and Storage

Stability and Storage	Shipped on Dry Ice. Store at -80°C. pH: 8.00 Preservative: 1.36% Imidazole
------------------------------	--

Constituents: 0.63% Tris HCl, 20% Glycerol (glycerin, glycerine), 0.58% Sodium chloride, 0.02% Potassium chloride, 0.05% (R*,R*)-1,4-Dimercaptobutan-2,3-diol

This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function

Tyrosine kinase of the non-receptor type, involved in the interleukin-2 and interleukin-4 signaling pathway. Phosphorylates STAT6, IRS1, IRS2 and PI3K.

Tissue specificity

In NK cells and an NK-like cell line but not in resting T-cells or in other tissues. The S-form is more commonly seen in hematopoietic lines, whereas the B-form is detected in cells both of hematopoietic and epithelial origins.

Involvement in disease

Defects in JAK3 are a cause of severe combined immunodeficiency autosomal recessive T-cell-negative/B-cell-positive/NK-cell-negative (T(-)B(+)NK(-) SCID) [MIM:600802]. A form of severe combined immunodeficiency (SCID), a genetically and clinically heterogeneous group of rare congenital disorders characterized by impairment of both humoral and cell-mediated immunity, leukopenia, and low or absent antibody levels. Patients present in infancy recurrent, persistent infections by opportunistic organisms. The common characteristic of all types of SCID is absence of T-cell-mediated cellular immunity due to a defect in T-cell development.

Sequence similarities

Belongs to the protein kinase superfamily. Tyr protein kinase family. JAK subfamily.
Contains 1 FERM domain.
Contains 1 protein kinase domain.
Contains 1 SH2 domain.

Domain

Possesses two phosphotransferase domains. The second one probably contains the catalytic domain (By similarity), while the presence of slight differences suggest a different role for domain 1.

Post-translational modifications

Tyrosine phosphorylated in response to IL-2 and IL-4.

Cellular localization

Endomembrane system. Wholly intracellular, possibly membrane associated.

Images

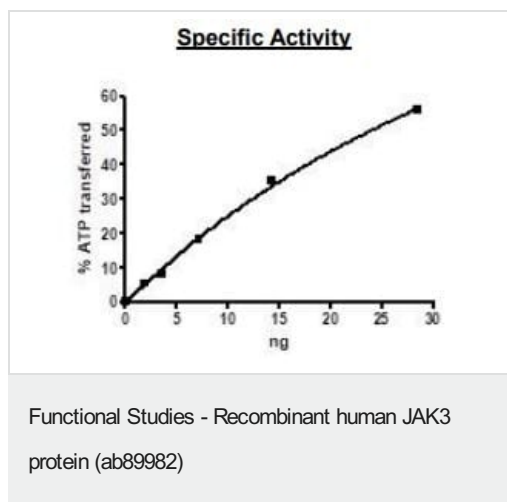
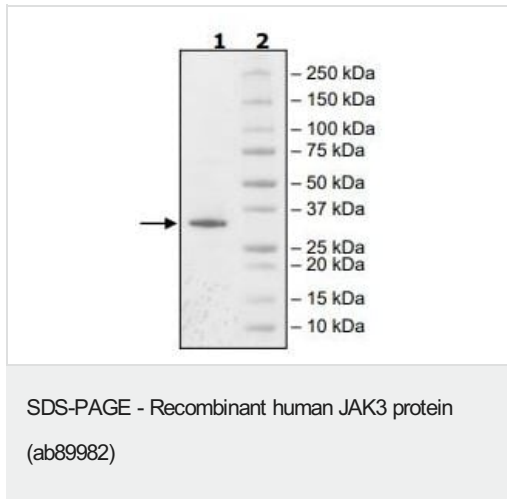


Image showing specific activity of ab89982.



4-20% SDS-page coomassie staining.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors