Datasheet for ABIN3093246

JAK3 Protein (AA 1-1124) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	JAK3
Protein Characteristics:	AA 1-1124
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This JAK3 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Sequence:	MAPPSEETPL IPQRSCSLLS TEAGALHVLL PARGPGPPQR LSFSFGDHLA EDLCVQAAKA SGILPVYHSL FALATEDLSC WFPPSHIFSV EDASTQVLLY RIRFYFPNWF GLEKCHRFGL RKDLASAILD LPVLEHLFAQ HRSDLVSGRL PVGLSLKEQG ECLSLAVLDL ARMAREQAQR PGELLKTVSY KACLPPSLRD LIQGLSFVTR RRIRRTVRRA LRRVAACQAD RHSLMAKYIM DLERLDPAGA AETFHVGLPG ALGGHDGLGL LRVAGDGGIA WTQGEQEVLQ PFCDFPEIVD ISIKQAPRVG PAGEHRLVTV TRTDNQILEA EFPGLPEALS FVALVDGYFR LTTDSQHFFC KEVAPPRLLE EVAEQCHGPI TLDFAINKLK TGGSRPGSYV LRRSPQDFDS FLLTVCVQNP LGPDYKGCLI RRSPTGTFLL VGLSRPHSSL RELLATCWDG GLHVDGVAVT LTSCCIPRPK EKSNLIVVQR GHSPPTSSLV QPQSQYQLSQ MTFHKIPADS LEWHENLGHG SFTKIYRGCR HEVVDGEARK TEVLLKVMDA KHKNCMESFL EAASLMSQVS YRHLVLLHGV CMAGDSTMVQ EFVHLGAIDM YLRKRGHLVP ASWKLQVVKQ LAYALNYLED KGLPHGNVSA RKVLLAREGA DGSPPFIKLS DPGVSPAVLS LEMLTDRIPW VAPECLREAQ TLSLEADKWG FGATVWEVFS

GVTMPISALD PAKKLQFYED RQQLPAPKWT ELALLIQQCM AYEPVQRPSF RAVIRDLNSL ISSDYELLSD PTPGALAPRD GLWNGAQLYA CQDPTIFEER HLKYISQLGK GNFGSVELCR YDPLGDNTGA LVAVKQLQHS GPDQQRDFQR EIQILKALHS DFIVKYRGVS YGPGRQSLRL VMEYLPSGCL RDFLQRHRAR LDASRLLLYS SQICKGMEYL GSRRCVHRDL AARNILVESE AHVKIADFGL AKLLPLDKDY YVVREPGQSP IFWYAPESLS DNIFSRQSDV WSFGVVLYEL FTYCDKSCSP SAEFLRMMGC ERDVPALCRL LELLEEGQRL PAPPACPAEV HELMKLCWAP SPQDRPSFSA LGPQLDMLWS GSRGCETHAF TAHPEGKHHS LSFS

Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.
The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

Product Details

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	JAK3
Alternative Name:	JAK3 (JAK3 Products)
Background:	Tyrosine-protein kinase JAK3 (EC 2.7.10.2) (Janus kinase 3) (JAK-3) (Leukocyte janus kinase) (L-JAK),FUNCTION: Non-receptor tyrosine kinase involved in various processes such as cell growth, development, or differentiation. Mediates essential signaling events in both innate and adaptive immunity and plays a crucial role in hematopoiesis during T-cells development. In the cytoplasm, plays a pivotal role in signal transduction via its association with type I receptors sharing the common subunit gamma such as IL2R, IL4R, IL7R, IL9R, IL15R and IL21R. 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, upon IL2R activation by IL2, JAK1 and JAK3 Molecules bind to IL2R beta (IL2RB) and gamma chain (IL2RG) subunits inducing the tyrosine phosphorylation of both receptor subunits on their cytoplasmic domain. Then, STAT5A and STAT5B are recruited, phosphorylated and activated by JAK1 and JAK3. Once activated, dimerized STAT5 translocates to the nucleus and promotes the transcription of specific target genes in a

Target Details

	cytokine-specific fashion. {ECO:0000269|PubMed:11909529, ECO:0000269|PubMed:20440074, ECO:0000269|PubMed:7662955, ECO:0000269|PubMed:8022485}.
Molecular Weight:	125.1 kDa
UniProt:	P52333
Pathways:	JAK-STAT Signaling, RTK Signaling, Response to Growth Hormone Stimulus, Regulation of Leukocyte Mediated Immunity, Production of Molecular Mediator of Immune Response, Protein targeting to Nucleus, Activated T Cell Proliferation, Unfolded Protein Response

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.

Handling

Expiry Date:	Unlimited (if stored properly)

Images

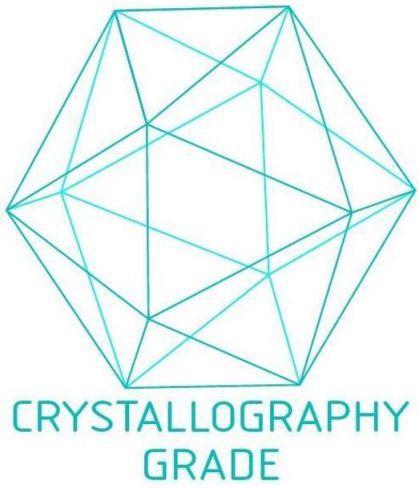

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process