Datasheet for ABIN3135504

JAK3 Protein (AA 1-1100) (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	JAK3
Protein Characteristics:	AA 1-1100
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This JAK3 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

Product Details

Sequence:	MAPPSEETPL IPQRSCSLSS SEAGALHVLL PPRGPGPPQR LSFSFGDYLA EDLCVRAAKA CGILPVYHSL FALATEDFSC WFPPSHIFCI EDVDTQVLVY RLRFYFPDWF GLETCHRFGL RKDLTSAILD LHVLEHLFAQ HRSDLVSGRL PVGLSMKEQG EFLSLAVLDL AQMAREQAQR PGELLKTVSY KACLPPSLRD VIQGQNFVTR RRIRRTVVLA LRRVVACQAD RYALMAKYIL DLERLHPAAT TETFRVGLPG AQEEPGLLRV AGDNGISWSS GDQELFQTFC DFPEIVDVSI KQAPRVGPAG EHRLVTVTRM DGHILEAEFP GLPEALSFVA LVDGYFRLIC DSRHYFCKEV APPRLLEEEA ELCHGPITLD FAIHKLKAAG SLPGTYILRR SPQDYDSFLL TACVQTPLGP DYKGCLIRQD PSGAFSLVGL SQPHRSLREL LAACWNSGLR VDGAALNLTS CCAPRPKEKS NLIVVRRGCT PAPAPGCSPS CCALTQLSFH TIPTDSLEWH ENLGHGSFTK IFRGRRREVV DGETHDSEVL LKVMDSRHRN CMESFLEAAS LMSQVSYPHL VLLHGVCMAG DSIMVQEFVY LGAIDMYLRK RGHLVSASWK LQVTKQLAYA LNYLEDKGLP HGNVSARKVL LAREGGDGNP PFIKLSDPGV SPTVLSLEML TDRIPWVAPE CLQEAQTLCL EADKWGFGAT TWEVFSGGPA

	HITSLEPAKK LKFYEDQGQL PALKWTELAG LITQCMAYDP GRRPSFRAIL RDLNGLITSD YELLSDPTPG IPSPRDELCG GAQLYACQDP AIFEERHLKY ISLLGKGNFG SVELCRYDPL GDNTGPLVAV KQLQHSGPDQ QRDFQREIQI LKALHSDFIV KYRGVSYGPG RQSLRLVMEY LPSGCLRDFL QRHRARLHTD RLLLFAWQIC KGMEYLGARR CVHRDLAARN ILVESEAHVK IADFGLAKLL PLGKDYYVVR EPGQSPIFWY APESLSDNIF SRQSDVWSFG VVLYELFTYC DKSCSPSAEF LRMMGPEREG PPLCRLLELL AEGRRLPPPP TCPTEVQELM QLCWAPSPHD RPAFGTLSPQ LDALWRGRPG **Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**
Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Mouse Jak3 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade. • 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. In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization). When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. 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. The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step

Product Details

	through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	JAK3
Alternative Name:	Jak3 (JAK3 Products)
Background:	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 cytokine-specific fashion. {ECO:0000269|PubMed:9016869}.
Molecular Weight:	123.6 kDa Including tag.
UniProt:	Q62137
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 gurantee though.
Comment:	Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

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