Datasheet for ABIN3137513

TBK1 Protein (AA 1-729) (His tag)

1 Image

Go to Product page

Overview

Quantity:	1 mg
Target:	TBK1
Protein Characteristics:	AA 1-729
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This TBK1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	MQSTSNHLWL LSDILGQGAT ANVFRGRHKK TGDLYAVKVF NNISFLRPVD VQMREFEVLK KLNHKNIVKL FAIEEETTTR HKVLIMEFCP CGSLYTVLEE PSNAYGLPES EFLIVLRDVV GGMNHLRENG IVHRDIKPGN IMRVIGEDGQ SVYKLTDFGA ARELEDDEQF VSLYGTEEYL HPDMYERAVL RKDHQKKYGA TVDLWSVGVT FYHAATGSLP FRPFEGPRRN KEVMYKIITG KPSGAISGVQ KAENGPIDWS GDMPLSCSLS QGLQALLTPV LANILEADQE KCWGFDQFFA ETSDVLHRMV IHVFSLQHMT AHKIYIHSYN TAAVFHELVY KQTKIVSSNQ ELIYEGRRLV LELGRLAQHF PKTTEENPIF VTSREQLNTV GLRYEKISLP KIHPRYDLDG DASMAKAVTG VVCYACRTAS TLLLYQELMR KGVRWLVELV KDDYNETVHK KTEVVITLDF CIRNIEKTVK VYEKLMKVNL EAAELGEISD IHTKLLRLSS SQGTIESSLQ DISSRLSPGG LLADTWAHQE GTHPRDRNVE KLQVLLNCIT EIYYQFKKDK AERRLAYNEE QIHKFDKQKL YYHATKAMSH FSEECVRKYE AFKDKSEEWM RKMLHLRKQL LSLTNQCFDI EEEVSKYQDY TNELQETLPQ KMLAASGGVK HAMAPIYPSS NTLVEMTLGM KKLKEEMEGV VKELAENNHI LERFGSLTMD

Product Details

	GGLRNVDCL **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 Tbk1 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 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.

Product Details

Grade:	Crystallography grade

Target Details

Target:	TBK1
Alternative Name:	Tbk1 (TBK1 Products)
Background:	Serine/threonine kinase that plays an essential role in regulating inflammatory responses to foreign agents. Following activation of toll-like receptors by viral or bacterial components, associates with TRAF3 and TANK and phosphorylates interferon regulatory factors (IRFs) IRF3 and IRF7 as well as DDX3X. This activity allows subsequent homodimerization and nuclear translocation of the IRFs leading to transcriptional activation of pro-inflammatory and antiviral genes including IFNA and IFNB. In order to establish such an antiviral state, TBK1 form several different complexes whose composition depends on the type of cell and cellular stimuli. Thus, several scaffolding molecules including FADD, TRADD, MAVS, AZI2, TANK or TBKBP1/SINTBAD can be recruited to the TBK1-containing-complexes. Under particular conditions, functions as a NF-kappa-B effector by phosphorylating NF-kappa-B inhibitor alpha/NFKBIA, IKBKB or RELA to translocate NF-Kappa-B to the nucleus. Restricts bacterial proliferation by phosphorylating the autophagy receptor OPTN/Optineurin on 'Ser-177', thus enhancing LC3 binding affinity and antibacterial autophagy. Phosphorylates and activates AKT1. Seems to play a role in energy balance regulation by sustaining a state of chronic, low-grade inflammation in obesity, wich leads to a negative impact on insulin sensitivity. {ECO:0000269|PubMed:10581243, ECO:0000269|PubMed:15210742, ECO:0000269|PubMed:15661922, ECO:0000269|PubMed:23396211}.
Molecular Weight:	84.4 kDa Including tag.
UniProt:	Q9WUN2
Pathways:	TLR Signaling, Activation of Innate immune Response, Hepatitis C, Toll-Like Receptors Cascades, SARS-CoV-2 Protein Interactome

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

Application Details

	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

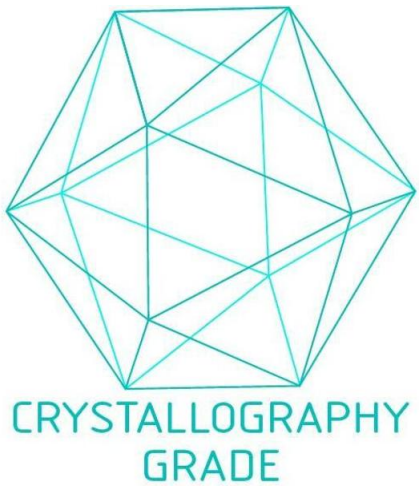

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process