Datasheet for ABIN3093093

IKBKB Protein (AA 1-756) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	IKBKB
Protein Characteristics:	AA 1-756
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This IKBKB protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Brand:	AliCE®
Sequence:	MSWSPSLTTQ TCGAWEMKER LGTGGFGNVI RWHNQETGEQ IAIKQCRQEL SPRNRERWCL EIQIMRRLTH PNVVAARDVP EGMQNLAPND LPLLAMEYCQ GGDLRKYLNQ FENCCGLREG AILTLLSDIA SALRYLHENR IIHRDLKPEN IVLQQGEQRL IHKIIDLGYA KELDQGSLCT SFVGTLQYLA PELLEQQKYT VTVDYWSFGT LAFECITGFR PFLPNWQPVQ WHSKVRQKSE VDIVVSEDLN GTVKFSSSLP YPNNLNSVLA ERLEKWLQLM LMWHPRQRGT DPTYGPNGCF KALDDILNLK LVHILNMVTG TIHTYPVTED ESLQSLKARI QQDTGIPEED QELLQEAGLA LIPDKPATQC ISDGKLNEGH TLDMDLVFLF DNSKITYETQ ISPRPQPESV SCILQEPKRN LAFFQLRKVW GQVWHSIQTL KEDCNRLQQG QRAAMMNLLR NNSCLSKMKN SMASMSQQLK AKLDFFKTSI QIDLEKYSEQ TEFGITSDKL LLAWREMEQA VELCGRENEV KLLVERMMAL QTDIVDLQRS PMGRKQGGTL DDLEEQAREL YRRLREKPRD QRTEGDSQEM VRLLLQAIQS FEKKVRVIYT QLSKTVVCKQ KALELLPKVE EVVSLMNEDE KTVVRLQEKR QKELWNLLKI ACSKVRGPVS

GSPDSMNASR LSQPGQLMSQ PSTASNSLPE PAKKSEELVA EAHNLCTLLE NAIQDTVREQ DQSFTALDWS WLQTEEEEHS CLEQAS

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 in one-step affinity chromatography
- 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 try to ensure that you receive soluble 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:

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

Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).

Product Details

Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	IKBKB
Alternative Name:	IKBKB (IKBKB Products)
Background:	Inhibitor of nuclear factor kappa-B kinase subunit beta (I-kappa-B-kinase beta) (IKK-B) (IKK-beta) (IkBKB) (EC 2.7.11.10) (I-kappa-B kinase 2) (IKK-2) (IKK2) (Nuclear factor NF-kappa-B inhibitor kinase beta) (NFKBIKB) (Serine/threonine protein kinase IKBKB) (EC 2.7.11.1),FUNCTION: Serine kinase that plays an essential role in the NF-kappa-B signaling pathway which is activated by multiple stimuli such as inflammatory cytokines, bacterial or viral products, DNA damages or other cellular stresses (PubMed:20434986, PubMed:20797629, PubMed:21138416, PubMed:9346484, PubMed:30337470). Acts as a part of the canonical IKK complex in the conventional pathway of NF-kappa-B activation (PubMed:9346484). Phosphorylates inhibitors of NF-kappa-B on 2 critical serine residues (PubMed:9346484, PubMed:20434986, PubMed:20797629, PubMed:21138416). These modifications allow polyubiquitination of the inhibitors and subsequent degradation by the proteasome (PubMed:9346484, PubMed:20434986, PubMed:20797629, PubMed:21138416). In turn, free NF-kappa-B is translocated into the nucleus and activates the transcription of hundreds of genes involved in immune response, growth control, or protection against apoptosis (PubMed:9346484, PubMed:20434986, PubMed:20797629, PubMed:21138416). In addition to the NF-kappa-B inhibitors, phosphorylates several other components of the signaling pathway including NEMO/IKBKG, NF-kappa-B subunits RELA and NFKB1, as well as IKK-related kinases TBK1 and IKBKE (PubMed:11297557, PubMed:14673179, PubMed:20410276, PubMed:21138416). IKK-related kinase phosphorylations may prevent the overproduction of inflammatory mediators since they exert a negative regulation on canonical IKKs (PubMed:11297557, PubMed:20410276, PubMed:21138416). Phosphorylates FOXO3, mediating the TNF-dependent inactivation of this pro-apoptotic transcription factor (PubMed:15084260). Also phosphorylates other substrates including NAA10, NCOA3, BCL10 and IRS1 (PubMed:19716809, PubMed:17213322). Phosphorylates RIPK1 at 'Ser-25' which represses its kinase activity and consequently prevents TNF-mediated RIPK1-dependent cell death (By similarity). Phosphorylates the C-terminus of IRF5, stimulating IRF5 homodimerization and translocation into the nucleus (PubMed:25326418). {ECO:0000250|UniProtKB:O88351, ECO:0000269|PubMed:11297557,

Target Details

	ECO:0000269|PubMed:14673179, ECO:0000269|PubMed:15084260, ECO:0000269|PubMed:17213322, ECO:0000269|PubMed:19716809, ECO:0000269|PubMed:20410276, ECO:0000269|PubMed:20434986, ECO:0000269|PubMed:20797629, ECO:0000269|PubMed:21138416, ECO:0000269|PubMed:25326418, ECO:0000269|PubMed:30337470, ECO:0000269|PubMed:9346484}.
Molecular Weight:	86.6 kDa
UniProt:	O14920
Pathways:	NF-kappaB Signaling, RTK Signaling, TCR Signaling, TLR Signaling, Fc-epsilon Receptor Signaling Pathway, Neurotrophin Signaling Pathway, Activation of Innate immune Response, Production of Molecular Mediator of Immune Response, Hepatitis C, Toll-Like Receptors Cascades, BCR Signaling, Ubiquitin Proteasome Pathway, S100 Proteins

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. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**

Handling

Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months

