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# Datasheet for ABIN3094053 IKBKG Protein (AA 1-419) (Strep Tag)





#### Overview

Quantity:	1 mg
Target:	IKBKG
Protein Characteristics:	AA 1-419
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This IKBKG protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

### Product Details

Sequence:	MNRHLWKSQL CEMVQPSGGP AADQDVLGEE SPLGKPAMLH LPSEQGAPET LQRCLEENQE
	LRDAIRQSNQ ILRERCEELL HFQASQREEK EFLMCKFQEA RKLVERLGLE KLDLKRQKEQ
	ALREVEHLKR CQQQMAEDKA SVKAQVTSLL GELQESQSRL EAATKECQAL EGRARAASEQ
	ARQLESEREA LQQQHSVQVD QLRMQGQSVE AALRMERQAA SEEKRKLAQL QVAYHQLFQE
	YDNHIKSSVV GSERKRGMQL EDLKQQLQQA EEALVAKQEV IDKLKEEAEQ HKIVMETVPV
	LKAQADIYKA DFQAERQARE KLAEKKELLQ EQLEQLQREY SKLKASCQES ARIEDMRKRH
	VEVSQAPLPP APAYLSSPLA LPSQRRSPPE EPPDFCCPKC QYQAPDMDTL QIHVMECIE
	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:

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- · 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 posttranslational 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 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.
- 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.

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Product Details	
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:	IKBKG
Alternative Name:	IKBKG (IKBKG Products)
Background:	NF-kappa-B essential modulator (NEMO) (FIP-3) (IkB kinase-associated protein 1) (IKKAP1)
	(Inhibitor of nuclear factor kappa-B kinase subunit gamma) (I-kappa-B kinase subunit gamma)
	(IKK-gamma) (IKKG) (IkB kinase subunit gamma) (NF-kappa-B essential modifier),FUNCTION:
	Regulatory subunit of the IKK core complex which phosphorylates inhibitors of NF-kappa-B
	thus leading to the dissociation of the inhibitor/NF-kappa-B complex and ultimately the
	degradation of the inhibitor (PubMed:9751060, PubMed:14695475, PubMed:20724660,
	PubMed:21518757). Its binding to scaffolding polyubiquitin plays a key role in IKK activation by
	multiple signaling receptor pathways (PubMed:16547522, PubMed:18287044,
	PubMed:19033441, PubMed:21606507, PubMed:27777308, PubMed:19185524,
	PubMed:33567255). Can recognize and bind both 'Lys-63'-linked and linear polyubiquitin upon
	cell stimulation, with a much higher affinity for linear polyubiquitin (PubMed:16547522,
	PubMed:18287044, PubMed:27777308, PubMed:19033441, PubMed:21606507,
	PubMed:19185524). Could be implicated in NF-kappa-B-mediated protection from cytokine
	toxicity. Essential for viral activation of IRF3 (PubMed:19854139). Involved in TLR3- and IFIH1-
	mediated antiviral innate response, this function requires 'Lys-27'-linked polyubiquitination
	(PubMed:20724660). {ECO:0000269 PubMed:14695475, ECO:0000269 PubMed:16547522,
	ECO:0000269 PubMed:18287044, ECO:0000269 PubMed:19033441,
	ECO:0000269 PubMed:19185524, ECO:0000269 PubMed:19854139,
	ECO:0000269 PubMed:20724660, ECO:0000269 PubMed:21518757,
	EC0:0000269 PubMed:21606507, EC0:0000269 PubMed:27777308,
	ECO:0000269 PubMed:33567255, ECO:0000269 PubMed:9751060}., FUNCTION: (Microbial
	infection) Also considered to be a mediator for HTLV-1 Tax oncoprotein activation of NF-kappa-
	B. {ECO:0000269 PubMed:10364167, ECO:0000269 PubMed:11064457}.
Molecular Weight:	48.2 kDa
UniProt:	Q9Y6K9
Pathways:	NF-kappaB Signaling, RTK Signaling, TCR Signaling, TLR Signaling, Fc-epsilon Receptor

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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.
Expiry Date:	Unlimited (if stored properly)



**Image 1.** "Crystallography Grade" protein due to multi-step, protein-specific purification process

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