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Datasheet for ABIN3095962  
**TNIK Protein (AA 1-1360) (Strep Tag)**

### Overview

Quantity:	1 mg
Target:	TNIK
Protein Characteristics:	AA 1-1360
Origin:	Human
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This TNIK protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

### Product Details

Sequence: MASDSPARSL DEIDLSALRD PAGIFELVEL VGNGTYGQVY KGRHVKTGQL AAIKVM DVTG  
DEEEEIKQEI NMLKKYSHHR NIATYYGAFI KKNPPGMDDQ LWLVMEFCGA GSVTDLIKNT  
KGNTLKEEWI AYICREILRG LSHLHQHKVI HRDIKGQNVL LTENA EVKLV DFGVSAQLDR  
TVGRRNTFIG TPYWMAPEVI ACDENPDATY DFKSDLWSLG ITAIEMAEGA PPLCDMHPMR  
ALFLIPRNPA PRLKSKKWSK KFQSFIESCL VKNHSQRPAT EQLMKHPFIR DQPNERQVRI  
QLKDHDRTK KKRGEKDETE YEYSGSEEEE EENDSGEPSS ILNLPGESTL RRDFLRQLA  
NKERSEALRR QQLEQQQREN EEHKRQLLAE RQKRIEEQKE QRRRLEEQQR REKELRKQQE  
REQRRHYEEQ MRREEERRRA EHEQEYIRRQ LEEEQRQLEI LQQQLLHEQA LLEYYKRKQL  
EEQRQAERLQ RQLKQERDYL VSLQHQRQEY RPVEKKPLYH YKEGMSPSEK PAWAKEVEER  
SRLNRQSSPA MPHKVANRIS DPNLPPRSES FSISGVQPAR TPPMLRPVDP QIPHLVAVKS  
QGPALTASQS VHEQPTKGLS GFQEALNVT S HRVEMPRQNS DPTSENPLP TRIEKFDRSS  
WLRQEEDIPP KVPQRRTTSS PALARKNSPG NGSALGPRLG SQPIRASNP D LRRTEPILES

PLQRTSSGSS SSSSTPSSQP SSQGGSQPGS QAGSSERTRV RANSKSEGGSP VLPHEPAKVK  
PEESRDITRP SRPASYKKAI DEDLTALAKE LRELRIEETN RPMKKVTDYS SSSEESSESE  
EEEEEDGESET HDGTVAVSDI PRLIPTGAPG SNEQYNVGMV GTHGLETSHA DSFSGSISRE  
GTLMIRETSK EKKRSGHSDS NGFAGHINLP DLVQQSHSPA GTPTEGLGRV STHSQEMDSG  
TEYGMGSSTK ASFTPFVDPR VYQTSPTDED EEDEESSAAA LFTSELLRQE QAKLNEARKI  
SVNVNPTNI RPHSDTPEIR KYKKRFNSEI LCAALWGVNL LVGTENGLML LDRSGQGKVV  
NLINRRRFQQ MDVLEGLNVL VTISGKKNKL RYYYYLWLRN RILHNDPEVE KKQGWITVGD  
LEGCIHYKVV KYERIKFLVI ALKNAVEIYA WAPKPYHKFM AFKSFADLQH KPLLVDLTV  
EGQRLKVIK SHTGFHVIDV DSGNSYDIY PSHIQGNITP HAVILPKTD GMEMLVCYED  
EGVYVNTYGR ITKDVVLQWG EMPTSVAYIH SNQIMGWGEK AIEIRSVETG HLDGVFMHKKR  
AQLKFLCER NDKVFFASVR SGGSSQVFFM TLNRNSMMNW

**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.**

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### 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

## Product Details

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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.

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**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.

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**Purity:** >80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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**Endotoxin Level:** Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

## Target Details

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**Target:** TNIK

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**Alternative Name:** TNIK ([TNIK Products](#))

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**Background:** TRAF2 and NCK-interacting protein kinase (EC 2.7.11.1),FUNCTION: Serine/threonine kinase that acts as an essential activator of the Wnt signaling pathway. Recruited to promoters of Wnt target genes and required to activate their expression. May act by phosphorylating TCF4/TCF7L2. Appears to act upstream of the JUN N-terminal pathway. May play a role in the response to environmental stress. Part of a signaling complex composed of NEDD4, RAP2A and TNIK which regulates neuronal dendrite extension and arborization during development. More generally, it may play a role in cytoskeletal rearrangements and regulate cell spreading. Phosphorylates SMAD1 on Thr-322. {ECO:0000269|PubMed:10521462, ECO:0000269|PubMed:15342639, ECO:0000269|PubMed:19061864, ECO:0000269|PubMed:19816403, ECO:0000269|PubMed:20159449, ECO:0000269|PubMed:21690388}.

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**Molecular Weight:** 154.9 kDa

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## Target Details

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UniProt: [Q9UKE5](#)

## Application Details

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**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

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**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)