

Datasheet for ABIN3094244

## NPHP4 Protein (AA 1-1426) (Strep Tag)



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### Overview

Quantity:	250 µg
Target:	NPHP4
Protein Characteristics:	AA 1-1426
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This NPHP4 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

### Product Details

Brand:	AliCE®
Sequence:	<p>MNDWHRIFTQ NVLVPPHPQR ARQPWKESTA FQCVLKWLDG PVIRQGVLEV LSEVECHLRV</p> <p>SFFDVTYRHF FGRTWKTTVK PTKRPPSRIV FNEPLYFHTS LNHPIHIVAVV EVVAEGKKRD</p> <p>GSLQTLSCGF GILRIFSNQP DSPISASQDK RLRLYHGTPR ALLHPLLQDP AEQNRHMTLI</p> <p>ENCSLQYTLK PHPALEPAFH LLPENLLVSG LQQIPGLLPA HGESGDALRK PRLQKPITGH</p> <p>LDDLFFTLYP SLEKFEEELL ELHVQDHFQE GCGPLDGGAL EILERRLRVG VHNGLG FVQR</p> <p>PQVVVLVPEM DVALTRSASF SRKVVSSTK SSGSQALVLR SRLRPLEMVG HPAFAVIFQL</p> <p>EYVFSSPAGV DGNAASVTSL SNLACMHMVR WAVWNPLLEA DSGRVTLP LQ GGIQPNPSHC</p> <p>LVYKVPSASM SSEEVKQVES GTLRFQFSLG SEEHLDAPE PVSGPKVERR PSRKPTSPS</p> <p>SPPAPVPRVL AAPQNSPVGP GLSISQLAAS PRSPTQHCLA RPTSQLPHGS QASPAQAQEF</p> <p>PLEAGISHLE ADLSQTSVLV ETSIAEQLQE LPFTPLHAPI VVGQTQRSSA GQPSRASMVL</p> <p>LQSSGFPEIL DANKQPAEAV SATEPVT FNP QKEESDCLQS NEMVLQFLAF SRVAQDCRG T</p>

SWPKTVYFTF QFYRFPPATT PRLQLVQLDE AGQPSSGALT HILVPVSRDG TFDAGSPGFQ  
LRYMVGPGFL KPGERRCFAR YLAVQTLQID VWDGDSLLLI GSAAVQMKHL LRQGRPAVQA  
SHELEVATE YEQDNMVVSG DMLGFGRVKP IGVHSVVKGR LHLTLANVGH PCEQKVRGCS  
TLPPSRSRVI SNDGASRFSG GSLLTTGSSR RKHVVQAQKL ADVDSELAAM LLTHARQGKG  
PQDVSRESDA TRRRKLERMR SVRLQEAGGD LGRRGTSVLA QQSVRTQHLR DLQVIAAYRE  
RTKAESIASL LSLAITTEHT LHATLGVAEF FEFVLKNPHN TQHTVTVEID NPELSVIVDS  
QEWRDFKGAA GLHTPVEEDM FHLRGSLAPQ LYLRPHETAH VPFKFQSFSA GQLAMVQASP  
GLSNEKGMDA VSPWKSSAVP TKHAKVLFRA SGGKPIAVLC LTVELQPHVV DQVFRFYHPE  
LSFLKKAIRL PPWHTFPGAP VGMLGEDPPV HVRCSDPNVI CETQNVGPGE PRDIFLKVAS  
GPSPEIKDFF VIIYSDRWLA TPTQTWQVYL HSLQRVDVSC VAGQLTRLSL VLRGTQTVRK  
VRAFTSHPQE LKTDPKGVEFV LPPRGVQDLH VGVRLRAGS RFVHLNLVDV DCHQLVASWL  
VCLCCRQLI SKAFEIMLAA GEGKGVNKRI TYTNPYPSRR TFHLHSDHPE LLRFREDSFQ  
VGGGETYTIG LQFAPSQRVG EEEILYIND HEDKNEEAFC VKVIYQ

**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 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

## Product Details

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

## Target Details

Target:	NPHP4
Alternative Name:	NPHP4 ( <a href="#">NPHP4 Products</a> )
Background:	<p>Nephrocystin-4 (Nephroretinin),FUNCTION: Involved in the organization of apical junctions, the function is proposed to implicate a NPHP1-4-8 module (PubMed:19755384, PubMed:21565611). Does not seem to be strictly required for ciliogenesis (PubMed:21565611). Required for building functional cilia. Involved in the organization of the subapical actin network in multiciliated epithelial cells. Seems to recruit INT to basal bodies of motile cilia which subsequently interacts with actin-modifying proteins such as DAAM1 (By similarity). In cooperation with INVS may down-regulate the canonical Wnt pathway and promote the Wnt-PCP pathway by regulating expression and subcellular location of disheveled proteins. Stabilizes protein levels of JADE1 and promotes its translocation to the nucleus leading to cooperative inhibition of canonical Wnt signaling (PubMed:21498478, PubMed:22654112). Acts as a negative regulator of the hippo pathway by association with LATS1 and modifying LATS1-dependent phosphorylation and localization of WWTR1/TAZ (PubMed:21555462).</p> <p>{ECO:0000250 UniProtKB:B0DOB4, ECO:0000250 UniProtKB:P59240, ECO:0000269 PubMed:21498478, ECO:0000269 PubMed:21555462, ECO:0000269 PubMed:21565611, ECO:0000269 PubMed:22654112, ECO:0000305 PubMed:19755384}.</p>

## Target Details

Molecular Weight: 157.6 kDa

UniProt: [O75161](#)

## 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 Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months