

Datasheet for ABIN3131055
KIF7 Protein (AA 1-1348) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	KIF7
Protein Characteristics:	AA 1-1348
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This KIF7 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Brand:	AlIcE®
Sequence:	<p>MGLEAQRLPG AEEAPVRVAL RVRPLLPKEL LHGHQSCLRV EPERGRITLG RDRHFGFHVV LGEDTGQEA VYACVQPLLE AFFEGFNATV FAYGQTGSGK TYTMGEASVA SLHEDEQGII PRAMAEAFKL IDENDLLDCL VHVSYLELYK EEFRLLEVG TASRDIQLRE DDRGNVVLGG VKEVDVEGLD EVLSLLEMGN AARHTGATHF NRLSSRSHTV FVTLEQRGR TPSRLPRPAA GHLLVSKFHF VDLAGSERVL KTGSTGERLK ESIQINSTLL ALGNVISALG DPQRRGSHIP YRDSKITRIL KDSLGGNAKT VMIACVSPSS SDFDETLNTL NYASRAQNIR NRATVNVHPE AERVPEEQAA GARGPPRHRS ETRIIHRGRR VPCPAVGSAA VAAGLGAECA RCRARTSAAY SLLRELQAEP GLPGAAARKV RDWLCAVEGE RSTLSSASGP DSGIESAPAE DQAAQGTSGR KGDEGTQQLL TLQSQVARLE EENRDFLAAL EDAMEQYKLQ SDRLREQQEE MVELRLRLEL AQPWGAPGL LQGLPPGSFV PRPHTAPLGG AHTHMLGMMP STCLPGEEVS SEQQVWSGKE VKAEVLAQAD KLRSASSTTS EEEGEEEEEE EEEEEPPRR TLYLRRNGIS NWSQRAGLSP</p>

GSPPDRKGPE VCPEEPAAAI PAPQAVGSGK VPVQTRQAPA AMASEWRLAQ AQQKIRELAI
NIRMKEELIG ELVRTGKAAQ ALNRQHSQRI RELEQEAERV RAECEGQRQ LRELEGREPQ
DASERSRLQE FRKRVAQAQS QVQVLKEKKQ ATERLVSLSA QSETRLQELE RNVQLMRRQQ
GQLQRRLREE TEQKRLETE MNKRQHRVKE LELKHEQQQK ILKIKTEEIA AFQRKRSSGS
NGSVVSLEQQ QKIEEQKKWL DQEMEKVLQQ RRALEELGEE LRKREVILAK KEALMQEKTG
LESKRLRSSQ ALNEDIVRVS SRLEHLEKEL SEKSGQLRQG SAQNQQQIRG EIDTLRQEKD
SLLKQRLEID SKLRQGSLLS PEEERTLFQL DEAIEALDAA IEYKNEAITC RQRVLRASAS
LLSQCEMNLM AKLSYLSSE TRALLCKYFD KVVTLREEQH QQQIAFSELE MQLEEQQRLV
YWLEVALERQ RLEMDRQLTL QQKEHEQNVQ LLLQQGRDHL GEGLADSKRQ YEARIHALEK
ELGRHMWINQ ELKQKLSAGS TAGQSQGCER RSLCLENRQC LGNEDGLHPA APEPLWQSSL
LEGVSRVWDE SRDLVHAPLP LTWKRSSLCS EQGSSEESRV RETTEPPVGR VLPMGEVGLS
WNFGPLPKPR WEPRTSPGM IDVRKNPL

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

Product Details

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:	KIF7
Alternative Name:	Kif7 (KIF7 Products)
Background:	<p>Kinesin-like protein KIF7,FUNCTION: Essential for hedgehog signaling regulation: acts both as a negative and a positive regulator of sonic hedgehog (Shh) and Indian hedgehog (Ihh) pathways, acting downstream of SMO, through both SUFU-dependent and -independent mechanisms. Involved in the regulation of microtubular dynamics. Required for proper organization of the ciliary tip and control of ciliary localization of SUFU-GLI2 complexes. Required for localization of GLI3 to cilia in response to Shh. Negatively regulates Shh signaling by preventing inappropriate activation of the transcriptional activator GLI2 in the absence of ligand. Positively regulates Shh signaling by preventing the processing of the transcription factor GLI3 into its repressor form.</p> <p>In keratinocytes, promotes the dissociation of SUFU-GLI2 complexes, GLI2 nuclear translocation and Shh signaling activation. Involved in the regulation of epidermal differentiation and chondrocyte development. {ECO:0000269 PubMed:19549984, ECO:0000269 PubMed:19592253, ECO:0000269 PubMed:19666503, ECO:0000269 PubMed:21795282, ECO:0000269 PubMed:23034632, ECO:0000269 PubMed:24952464}.</p>
Molecular Weight:	151.6 kDa
UniProt:	B7ZNG0

Target Details

Pathways: [Hedgehog Signaling](#)

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