

Datasheet for ABIN3092991

**HOOK3 Protein (AA 1-718) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	HOOK3
Protein Characteristics:	AA 1-718
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HOOK3 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Sequence:	MFSVESLERA ELCESLLTWI QTFNVDPACQ TVEDLTNGVV MAQVLQKIDP AYFDENWLNLR IKTEVGDNWR LKISNLKKIL KGILDYNHEI LGQQINDFTL PDVNLIGEHS DAAELGRMLQ LILGCAVNCE QKQEYIQAIM MMEESVQHVV MTAIQELMSK ESPVSAGNDA YVDLDRQLKK TTEELNEALS AKEEIAQRCH ELDMQVAALQ EEKSSLLAEN QVLMERLNQS DSIEDPNSPA GRRHLQLQTQ LEQLQEETFR LEAAKDDYRI RCEELEKEIS ELRQQNDEL TLADEAQLK DEIDVLRHSS DKVSKLEGQV ESYKKKLEDL GDLRRQVKLL EEKNTMYMQN TVSLEEELRK ANAARSQLET YKRQVVELQN RLSEESKKAD KLD FEYKRLK EKVDSLQKEK DRLRTERDSL KETIEELRCV QAQEGQLTTQ GLMPLGSQES SDSLAAEIVT PEIREKLIRL QHENKMLKLN QEGSDNEKIA LLQSLDDAN LRKNELETEN RLVNQRLLEV QSQVEELQKS LQDQGSKAED SVLLKKKLEE HLEKLHEANN ELQKKRAIE DLEPRFNNSS LKIEELQEAL RKKEEEMKQM EERYKKYLEK AKSVIRTLDP KQNQGAPEI QALKNQLQER DRLFHSLEKE YEKTKSQREM EEKYIVSAWY NMGMTLHKKA AEDRLASTGS GQSFLARQRQ ATSSRRSYPG HVQPATAR
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**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 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®):

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## Product Details

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.

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: HOOK3

Alternative Name: HOOK3 ([HOOK3 Products](#))

Background: Protein Hook homolog 3 (h-hook3) (hHK3),FUNCTION: Acts as an adapter protein linking the dynein motor complex to various cargos and converts dynein from a non-processive to a highly processive motor in the presence of dynactin. Facilitates the interaction between dynein and dynactin and activates dynein processivity (the ability to move along a microtubule for a long distance without falling off the track). Predominantly recruits 2 dyneins, which increases both the force and speed of the microtubule motor (PubMed:25035494, PubMed:33734450). Component of the FTS/Hook/FHIP complex (FHF complex). The FHF complex may function to promote vesicle trafficking and/or fusion via the homotypic vesicular protein sorting complex (the HOPS complex). May regulate clearance of endocytosed receptors such as MSR1. Participates in defining the architecture and localization of the Golgi complex. FHF complex promotes the distribution of AP-4 complex to the perinuclear area of the cell (PubMed:32073997). {ECO:0000250|UniProtKB:Q8BUK6, ECO:0000269|PubMed:11238449, ECO:0000269|PubMed:17237231, ECO:0000269|PubMed:18799622, ECO:0000269|PubMed:25035494, ECO:0000269|PubMed:32073997, ECO:0000269|PubMed:33734450}., FUNCTION: (Microbial infection) May serve as a target for the spiC protein from Salmonella typhimurium, which inactivates it, leading to a strong alteration in cellular trafficking. {ECO:0000305}.

Molecular Weight: 83.1 kDa

UniProt: [Q86VS8](#)

Pathways: [Stem Cell Maintenance](#), [Maintenance of Protein Location](#)

## 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.
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Comment:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
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Restrictions:	For Research Use only
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## 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