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Datasheet for ABIN3090907

## CEP164 Protein (AA 1-1460) (Strep Tag)

### 1 Image

#### Overview

Quantity:	1 mg
Target:	CEP164
Protein Characteristics:	AA 1-1460
Origin:	Human
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This CEP164 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

#### Product Details

Sequence: MAGRPLRIGD QLVLEEDYDE TYIPSEQEIL EFAREIGIDP IKEPELMWLA REGIVAPLPG  
EWKPCQDITG DIYYNFNANG QSMWDHPCDE HYRSLVIQER AKLSTSGAIK KKKKKKEKGD  
KKDRDPPKSS LALGSSLAPV HVPLGGLAPL RGLVDTPPSA LRGSQSVSLG SSVESGRQLG  
ELMLPSQGLK TSAYTKLLG SIYEDKTALS LLGLGEETNE EDEEESDNQS VHSSEPLRN  
LHLDIGALGG DFEYEESLRT SQPEEKDVS LDSAAGPPT PCKPSSPGAD SSLSSAVGKG  
RQGSGARPGL PEKEENEKSE PKICRNLVTP KADPTGSEPA KASEKEAPED TVDAGEEGSR  
REEAAKEPKK KASALEEGSS DASQELEISE HMKEPQLSDS IASDPKSFHG LDFGFRSRIS  
EHLLDVDVLS PVLGGACRQA QQPLGIEDKD DSQSSQDELQ SKQSKGLEER LSPPLPHEER  
AQSPRSLAT EEEPPQGPEG QPEWKEAEL GEDSAASLSL QLSLQREQAP SPPAACEKGG  
EQHSQAEELG PGQEEAEDPE EKVAVSPTPP VSPEVRSTEP VAPPEQLSEA ALKAMEEAVA  
QVLEQDQRHL LESKQEKMQQ LREKLCQEEE EEILRLHQQK EQSLSSLRER LQKAIEEEEE  
RMREESQRL SWLRAQVQSS TQADEDQIRA EQEASLQKLR EELESQQKAE RASLEQKNRQ

MLEQLKEEIE ASEKSEQAAL NAAKEKALQQ LREQLEGERK EAVATLEKEH SAELERLCSS  
LEAKHREVVS SLQKKIQEAQ QKEEAQLQKC LGQVEHRVHQ KSYHVAGYEH ELSSLLREKR  
QEVEGEHERR LDKMKEEHQQ VMAKAREQYE AEERKQRAEL LGHLTGELER LQRAHERELE  
TVRQEQHKRL EDLRRRHREQ ERKLQDLELD LETRAKDVKA RLALLEVQEE TARREKQQLL  
DVQRQVALKS EEATATHQQL EEAQKEHTHL LQSNQQLREI LDELQARKLK LESQVDLLQA  
QSQQQLQKHFS SLEAEAQKKQ HLLREVTVEE NNASPHFEPD LHIEDLRKSL GTNQTKEVSS  
SLSQSKEDLY LDSLSSHNVW HLLSAEGVAL RSAKEFLVQQ TRSMRRRQTA LKAAQQHWRH  
ELASAEVAK DPPGIKAL ED MRKNLEKETR HLDEMKSAMR KGHNLLKKKE EKLNLQLESSL  
WEEASDEGTL GGSPTKKA VT FDLSDMDSLS SESSESFSP HREWWRQRI DSTPSLTSRK  
IHGLSHSLRQ ISSQLSSVLS ILDSLNPQSP PPLLASMPAQ LPPRDPKSTP TPTYYGSLAR  
FSALSSATPT STQAWWDSGQ GPRLPSSVAQ TVDDFLLEKW RKYFPSGIPL LSNSTPLES  
RLGYMSASEQ LRLQLQSHSQ VPEAGSTTFQ GIIEANRRWL ERVKNDPRLP LFSSTPKPKA  
TSLLLQLGLD EHN RVKYRF

**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

## Product Details

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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.

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Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): <ol style="list-style-type: none"><li>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.</li><li>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.</li></ol>
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

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Target:	CEP164
Alternative Name:	CEP164 ( <a href="#">CEP164 Products</a> )
Background:	Centrosomal protein of 164 kDa (Cep164),FUNCTION: Plays a role in microtubule organization and/or maintenance for the formation of primary cilia (PC), a microtubule-based structure that protrudes from the surface of epithelial cells. Plays a critical role in G2/M checkpoint and nuclear divisions. A key player in the DNA damage-activated ATR/ATM signaling cascade since it is required for the proper phosphorylation of H2AX, RPA, CHEK2 and CHEK1. Plays a critical role in chromosome segregation, acting as a mediator required for the maintenance of genomic stability through modulation of MDC1, RPA and CHEK1. {ECO:0000269 PubMed:17954613, ECO:0000269 PubMed:18283122, ECO:0000269 PubMed:23348840}.

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## Target Details

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Molecular Weight: 164.3 kDa

UniProt: [Q9UPV0](#)

Pathways: [M Phase](#)

## 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)



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