

Datasheet for ABIN3091740  
**NCAPD2 Protein (AA 1-1401) (Strep Tag)**



[Go to Product page](#)

1 Image

Overview

Quantity:	1 mg
Target:	NCAPD2
Protein Characteristics:	AA 1-1401
Origin:	Human
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This NCAPD2 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MAPQMYEFHL PLSPEELLKS GGVNQYVVQE VLSIKHLPPQ LRAFQAAFRA QGPLAMLQHF  
DTIYSILHHF RSIDPGLKED TLQFLIKVVS RHSQELPAIL DDTTLGSDR NAHLNALKMN  
CYALIRLLES FETMASQTNL VDLDLGGK GK KARTKAAHGF DWEEERQPIL QLLTQLQLD  
IRHLWNHSII EEEFVSLVTG CCYRLLENPT INHQKNRPTR EAITHLLGVA LTRYNHMLSA  
TVKIIQMLQH FEHLAPVLVA AVSLWATDYG MKSIVGEIVR EIGQKCPQEL SRDPSGTKGF  
AAFLTELAER VPAILMSSMC ILLDHL DGEN YMMRNAVLA MAEMVLQVLS GDQLEAAARD  
TRDQFLDTLQ AHGHDVNSFV RSRVLQLFTR IVQQKALPLT RFQAVVALAV GRLADKSVLV  
CKNAIQLLAS FLANNPFSCK LSDADLAGPL QKETQKLQEM RAQRRTAAAS AVLDPEEEWE  
AMLPELKSTL QLLQLPQGE EEIPEQIANT ETEDVKGRI YQLLAKASYK KAILTREAT  
GHFQESEPFS HIDPEESEET RLLNILGLIF KGPAASTQEK NPRESTGNMV TGQTVCKNKP  
NMSDPEESRG NDELVKQEML VQYLQDAYSF SRKITEAIGI ISKMMYENTT TVVQEVIEFF  
VMVFQFGVPQ ALFGVRRMLP LIWSKEPGVR EAVLNAYRQL YLNPKGDSAR AKAQALIQNL

SLLLVDASVG TIQCLEEILC EFVQKDELKP AVTQLLWERA TEKVACCPLE RCSSVMLLGM  
MARGKPEIVG SNLDTLVSIG LDEKFPQDYR LAQQVCHAIA NISDRRKPSL GKRHPPFRLP  
QEHRLEFRLR ETVTKGFVHP DPLWIPFKEV AVTLIYQLAE GPEVICAQIL QGCAKQALEK  
LEEKRTSQED PKESPAMLPT FLLMNLLSLA GDVALQQLVH LEQAVSGELC RRRVLREEQE  
HKTKDPKEKN TSSETTMEEE LGLVGATADD TEAELIRGIC EMELLDGKQT LAAFVPLLLK  
VCNNPGLYSN PDLASAAASLA LGKFCMISAT FCDSQLRLLF TMLEKSPLPI VRSNLMVATG  
DLAIRFPNLV DPWTPHLYAR LRDPAQQVRK TAGLVMTHLI LKDMVKVKGQ VSEMAVLLID  
PEPQIAALAK NFFNELSHKG NAIYNLLPDI ISRLSDPELG VEEEPFHTIM KQLLSYITKD  
KQTESLVEKL CQRFRTSRTE RQQRDLAYCV SQLPLTERGL RKMLDNFDCF GDKLSDESIF  
SAFLSVGKL RRGAKPEGKA IIDEFEQKLR ACHTRGLDGI KELEIGQAGS QRAPSACKPS  
TGSRYQPLAS TASNDFVTP EPRRTTRRHP NTQQRASKKK PKVVFSSDES SEEDLSAEMT  
EDETPKKTTP ILRASARRHR S

**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

## Product Details

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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

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## Target Details

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Target:	NCAPD2
Alternative Name:	NCAPD2 ( <a href="#">NCAPD2 Products</a> )
Background:	Condensin complex subunit 1 (Chromosome condensation-related SMC-associated protein 1) (Chromosome-associated protein D2) (hCAP-D2) (Non-SMC condensin I complex subunit D2) (XCAP-D2 homolog),FUNCTION: Regulatory subunit of the condensin complex, a complex required for conversion of interphase chromatin into mitotic-like condense chromosomes. The condensin complex probably introduces positive supercoils into relaxed DNA in the presence of type I topoisomerases and converts nicked DNA into positive knotted forms in the presence of type II topoisomerases. May target the condensin complex to DNA via its C-terminal domain (PubMed:11136719). May promote the resolution of double-strand DNA catenanes (intertwines) between sister chromatids. Condensin-mediated compaction likely increases tension in catenated sister chromatids, providing directionality for type II topoisomerase-

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## Target Details

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mediated strand exchanges toward chromatid decatenation. Required for decatenation of non-centromeric ultrafine DNA bridges during anaphase. Early in neurogenesis, may play an essential role to ensure accurate mitotic chromosome condensation in neuron stem cells, ultimately affecting neuron pool and cortex size (PubMed:27737959).  
{ECO:0000269|PubMed:11136719, ECO:0000269|PubMed:27737959}.

Molecular Weight: 157.2 kDa

UniProt: [Q15021](#)

## 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