

Datasheet for ABIN3091948

Cullin 4A Protein (CUL4A) (AA 1-759) (Strep Tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	Cullin 4A (CUL4A)
Protein Characteristics:	AA 1-759
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Cullin 4A protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MADEAPRKGS FSALVGRTNG LTKPAALAAA PAKPGGAGGS KKLVIKNFRD RPRLPDNYTQ DTWRKLHEAV RAVQSSTSIR YNLEELYQAV ENLCSHKVSP MLYKQLRQAC EDHVQAQILP FREDSLDSVL FLKKINTCWQ DHCQRQMIMIR SIFLFLDRTY VLQNSTLPSI WDMGLELFRT HIISDKMVQS KTIDGILLI ERERSGEAVD RSLLRSLGGM LSDLQVYKDS FELKFLEETN CLYAAEQRL MQEREVPEYL NHVSKRLEEE GDRVITYLDH STQKPLIACV EKQLLGEHLT AILQKGLDHL LDENRVPDLA QMYQLFSRVR GGQQALLQHW SEYIKTFGTA IVINPEKDKD MVQDLLDFKD KVDHVIEVCF QKNERFVNLM KESFETFINK RPNKPAELIA KHVDSKLRAG NKEATDEELE RTLDKIMILF RFIHGKDVFE AFYKKDLAKR LLVGKSASVD AEKSMLSCLK HECGAFTSK LEGMFKDMEL SKDIMVHFKQ HMQNSQSDSGP IDLTVNILTM GYWPTYTPME VHLTPMIKL QEVFKAFYLG KHSGRKLQWQ TTLGHAVLKA EFKEGKKEFQ VSLFQTLVLL MFNEGDGFSF EEIKMATGIE DSELRRTLQS LACGKARVLI KSPKGKEVED GDKFIFNGEF KHKLFRIKIN QIQMKETVEE QVSTTERVFQ DRQYQIDAAI VRIMKMRKTL GHNLLVSELY
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NQLKFPVKPG DLKKRIESLI DRDYMERDKD NPNQYHYVA

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 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

Product Details

(ALiCE®):

- 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: Cullin 4A (CUL4A)

Alternative Name: CUL4A (CUL4A Products)

Background: Cullin-4A (CUL-4A),FUNCTION: Core component of multiple cullin-RING-based E3 ubiquitin-protein ligase complexes which mediate the ubiquitination of target proteins (PubMed:14578910, PubMed:15811626, PubMed:15548678, PubMed:15448697, PubMed:14739464, PubMed:16678110, PubMed:17041588, PubMed:24209620, PubMed:30166453, PubMed:33854232, PubMed:33854239). As a scaffold protein may contribute to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme (PubMed:14578910, PubMed:15811626, PubMed:15548678, PubMed:15448697, PubMed:14739464, PubMed:16678110, PubMed:17041588, PubMed:24209620). The E3 ubiquitin-protein ligase activity of the complex is dependent on the neddylation of the cullin subunit and is inhibited by the association of the deneddylated cullin subunit with TIP120A/CAND1 (PubMed:14578910, PubMed:15811626, PubMed:15548678, PubMed:15448697, PubMed:14739464, PubMed:16678110, PubMed:17041588, PubMed:24209620). The functional specificity of the E3 ubiquitin-protein ligase complex depends on the variable substrate recognition component (PubMed:14578910, PubMed:15811626, PubMed:15548678, PubMed:15448697, PubMed:14739464, PubMed:16678110, PubMed:17041588, PubMed:24209620). DCX(DET1-COP1) directs ubiquitination of JUN (PubMed:14739464). DCX(DDB2) directs ubiquitination of XPC (PubMed:15811626). DCX(DDB2) ubiquitinates histones H3-H4 and is required for efficient histone deposition during replication-coupled (H3.1) and replication-independent (H3.3) nucleosome assembly, probably by facilitating the transfer of H3 from ASF1A/ASF1B to other chaperones involved in histone deposition (PubMed:16678110, PubMed:17041588,

Target Details

PubMed:24209620). DCX(DTL) plays a role in PCNA-dependent polyubiquitination of CDT1 and MDM2-dependent ubiquitination of p53/TP53 in response to radiation-induced DNA damage and during DNA replication (PubMed:14578910, PubMed:15548678, PubMed:15448697). DCX(DTL) directs autoubiquitination of DTL (PubMed:23478445). In association with DDB1 and SKP2 probably is involved in ubiquitination of CDKN1B/p27kip (PubMed:16537899). Is involved in ubiquitination of HOXA9 (PubMed:14609952). The DDB1-CUL4A-DTL E3 ligase complex regulates the circadian clock function by mediating the ubiquitination and degradation of CRY1 (PubMed:26431207). A number of DCX complexes (containing either TRPC4AP or DCAF12 as substrate-recognition component) are part of the DesCEND (destruction via C-end degrons) pathway, which recognizes a C-degron located at the extreme C terminus of target proteins, leading to their ubiquitination and degradation (PubMed:29779948). The DCX(AMBRA1) complex is a master regulator of the transition from G1 to S cell phase by mediating ubiquitination of phosphorylated cyclin-D (CCND1, CCND2 and CCND3) (PubMed:33854232, PubMed:33854239). The DCX(AMBRA1) complex also acts as a regulator of Cul5-RING (CRL5) E3 ubiquitin-protein ligase complexes by mediating ubiquitination and degradation of Elongin-C (ELOC) component of CRL5 complexes (PubMed:30166453). With CUL4B, contributes to ribosome biogenesis (PubMed:26711351). {ECO:0000269|PubMed:14578910, ECO:0000269|PubMed:14609952, ECO:0000269|PubMed:14739464, ECO:0000269|PubMed:15448697, ECO:0000269|PubMed:15548678, ECO:0000269|PubMed:15811626, ECO:0000269|PubMed:16537899, ECO:0000269|PubMed:16678110, ECO:0000269|PubMed:17041588, ECO:0000269|PubMed:23478445, ECO:0000269|PubMed:24209620, ECO:0000269|PubMed:26431207, ECO:0000269|PubMed:26711351, ECO:0000269|PubMed:29779948, ECO:0000269|PubMed:30166453, ECO:0000269|PubMed:33854232, ECO:0000269|PubMed:33854239}.

Molecular Weight: 87.7 kDa

UniProt: [Q13619](#)

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

Application Details

even the most difficult-to-express proteins, including those that require post-translational modifications.

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Restrictions: For Research Use only

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)

Images



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