Datasheet for ABIN3091967

Cullin 4B Protein (CUL4B) (AA 1-913) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	Cullin 4B (CUL4B)
Protein Characteristics:	AA 1-913
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Cullin 4B protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MMSQSSGSGD GNDDEATTSK DGGFSSPSPS AAAAAQEVRS ATDGNTSTTP PTSAKKRKLN SSSSSSSNSS NEREDFDSTS SSSSTPPLQP RDSASPSTSS FCLGVSVAAS SHVPIQKKLR FEDTLEFVGF DAKMAEESSS SSSSSSPTAA TSQQQQLKNK SILISSVASV HHANGLAKSS TTVSSFANSK PGSAKKLVIK NFKDKPKLPE NYTDETWQKL KEAVEAIQNS TSIKYNLEEL YQAVENLCSY KISANLYKQL RQICEDHIKA QIHQFREDSL DSVLFLKKID RCWQNHCRQM IMIRSIFLFL DRTYVLQNSM LPSIWDMGLE LFRAHIISDQ KVQNKTIDGI LLLIERERNG EAIDRSLLRS LLSMLSDLQI YQDSFEQRFL EETNRLYAAE GQKLMQEREV PEYLHHVNKR LEEEADRLIT YLDQTTQKSL IATVEKQLLG EHLTAILQKG LNNLLDENRI QDLSLLYQLF SRVRGGVQVL LQQWIEYIKA FGSTIVINPE KDKTMVQELL DFKDKVDHII DICFLKNEKF INAMKEAFET FINKRPNKPA ELIAKYVDSK LRAGNKEATD EELEKMLDKI MIIFRFIYGK DVFEAFYKKD LAKRLLVGKS ASVDAEKSML SKLKHECGAA FTSKLEGMFK DMELSKDIMI QFKQYMQNQN VPGNIELTVN ILTMGYWPTY VPMEVHLPPE MVKLQEIFKT FYLGKHSGRK

LQWQSTLGHC VLKAEFKEGK KELQVSLFQT LVLLMFNEGE EFSLEEIKQA TGIEDGELRR TLQSLACGKA RVLAKNPKGK DIEDGDKFIC NDDFKHKLFR IKINQIQMKE TVEEQASTTE RVFQDRQYQI DAAIVRIMKM RKTLSHNLLV SEVYNQLKFP VKPADLKKRI ESLIDRDYME RDKENPNQYN YIA

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.

Product Details

- 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®): 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 4B (CUL4B)
Alternative Name:	CUL4B (CUL4B Products)
Background:	Cullin-4B (CUL-4B),FUNCTION: Core component of multiple cullin-RING-based E3 ubiquitin-protein ligase complexes which mediate the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:14578910, PubMed:16322693, PubMed:16678110, PubMed:18593899, PubMed:29779948, PubMed:30166453, PubMed:33854232, PubMed:33854239, PubMed:22118460). The functional specificity of the E3 ubiquitin-protein ligase complex depends on the variable substrate recognition subunit (PubMed:14578910, PubMed:16678110, PubMed:18593899, PubMed:29779948, PubMed:22118460). CUL4B may act within the complex as a scaffold protein, contributing to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme (PubMed:14578910, PubMed:16678110, PubMed:18593899, PubMed:22118460). Plays a role as part of the E3 ubiquitin-protein ligase complex in polyubiquitination of CDT1, histone H2A, histone H3 and histone H4 in response to radiation-induced DNA damage (PubMed:14578910, PubMed:16678110, PubMed:18593899). Targeted to UV damaged chromatin by DDB2 and may be important for DNA repair and DNA replication (PubMed:16678110). 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

Target Details

	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). Required for ubiquitination of cyclin E (CCNE1 or CCNE2), and consequently, normal G1 cell cycle progression (PubMed:16322693, PubMed:19801544). Regulates the mammalian target-of-rapamycin (mTOR) pathway involved in control of cell growth, size and metabolism (PubMed:18235224). Specific CUL4B regulation of the mTORC1-mediated pathway is dependent upon 26S proteasome function and requires interaction between CUL4B and MLST8 (PubMed:18235224). With CUL4A, contributes to ribosome biogenesis (PubMed:26711351). {ECO:0000269|PubMed:14578910, ECO:0000269|PubMed:16322693, ECO:0000269|PubMed:16678110, ECO:0000269|PubMed:18235224, ECO:0000269|PubMed:18593899, ECO:0000269|PubMed:19801544, ECO:0000269|PubMed:22118460, ECO:0000269|PubMed:26711351, ECO:0000269|PubMed:29779948, ECO:0000269|PubMed:30166453, ECO:0000269|PubMed:33854232, ECO:0000269|PubMed:33854239}.
Molecular Weight:	104.0 kDa
UniProt:	Q13620

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!

Application Details

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