Datasheet for ABIN3092033

Cullin 2 Protein (CUL2) (AA 1-745) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	Cullin 2 (CUL2)
Protein Characteristics:	AA 1-745
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Cullin 2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MSLKPRVVDF DETWNKLLTT IKAVVMLEYV ERATWNDRFS DIYALCVAYP EPLGERLYTE TKIFLENHVR HLHKRVLESE EQVLVMYHRY WEEYSKGADY MDCLYRYLNT QFIKKNKLTE ADLQYGYGGV DMNEPLMEIG ELALDMWRKL MVEPLQAILI RMLLREIKND RGGEDPNQKV IHGVINSFVH VEQYKKKFPL KFYQEIFESP FLTETGEYYK QEASNLLQES NCSQYMEKVL GRLKDEEIRC RKYLHPSSYT KVIHECQQRM VADHLQFLHA ECHNIIRQEK KNDMANMYVL LRAVSTGLPH MIQELQNHIH DEGLRATSNL TQENMPTLFV ESVLEVHGKF VQLINTVLNG DQHFMSALDK ALTSVVNYRE PKSVCKAPEL LAKYCDNLLK KSAKGMTENE VEDRLTSFIT VFKYIDDKDV FQKFYARMLA KRLIHGLSMS MDSEEAMINK LKQACGYEFT SKLHRMYTDM SVSADLNNKF NNFIKNQDTV IDLGISFQIY VLQAGAWPLT QAPSSTFAIP QELEKSVQMF ELFYSQHFSG RKLTWLHYLC TGEVKMNYLG KPYVAMVTTY QMAVLLAFNN SETVSYKELQ DSTQMNEKEL TKTIKSLLDV KMINHDSEKE DIDAESSFSL NMNFSSKRTK FKITTSMQKD TPQEMEQTRS AVDEDRKMYL QAAIVRIMKA RKVLRHNALI QEVISQSRAR FNPSISMIKK

	CIEVLIDKQY IERSQASADE YSYVA **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 2 (CUL2)
Alternative Name:	CUL2 (CUL2 Products)
Background:	Cullin-2 (CUL-2),FUNCTION: Core component of multiple cullin-RING-based ECS (ElonginB/C-CUL2/5-SOCS-box protein) E3 ubiquitin-protein ligase complexes, which mediate the ubiquitination of target proteins (PubMed:11384984, PubMed:26138980, PubMed:29779948, PubMed:29775578). CUL2 may serve as a rigid scaffold in the complex and may contribute to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme (PubMed:9122164, PubMed:10973499, PubMed:11384984, PubMed:12609982, PubMed:24076655). 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:12609982, PubMed:24076655, PubMed:27565346). The functional specificity of the ECS complex depends on the substrate recognition component (PubMed:9122164, PubMed:10973499, PubMed:26138980, PubMed:29779948, PubMed:29775578). ECS(VHL) mediates the ubiquitination of hypoxia-inducible factor (HIF) (PubMed:9122164, PubMed:10973499). A number of ECS complexes (containing either KLHDC2, KLHDC3, KLHDC10, APPBP2, FEM1A, FEM1B or FEM1C 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:26138980, PubMed:29779948, PubMed:29775578). ECS complexes and ARIH1 collaborate in tandem to mediate ubiquitination of target proteins (PubMed:27565346). ECS(LRR1) ubiquitinates MCM7 and promotes CMG replisome disassembly by VCP and chromatin extraction during S-phase (By similarity). {ECO:0000250|UniProtKB:Q9D4H8, ECO:0000269|PubMed:10973499,

Target Details

	ECO:0000269|PubMed:11384984, ECO:0000269|PubMed:12609982, ECO:0000269|PubMed:24076655, ECO:0000269|PubMed:26138980, ECO:0000269|PubMed:27565346, ECO:0000269|PubMed:29775578, ECO:0000269|PubMed:29779948, ECO:0000269|PubMed:9122164}.
Molecular Weight:	87.0 kDa
UniProt:	Q13617
Pathways:	M Phase, Asymmetric Protein Localization, SARS-CoV-2 Protein Interactome

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!
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.

Handling

Expiry Date:	Unlimited (if stored properly)

Images

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