

Datasheet for ABIN3137330

Cullin 3 Protein (CUL3) (AA 2-768) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	Cullin 3 (CUL3)
Protein Characteristics:	AA 2-768
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Cullin 3 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence:	<p>SNLSKGTGSR KDTKMIRAF PMTMDEKYVN SIWDLKNAI QEIQRKNSG LSFEELYRNA</p> <p>YTMVLHKHGE KLYTGLREVV TEHLINKVRE DVLNSLNNNF LQTLNQAWND HQTAMVMIRD</p> <p>ILMYMDRVVY QQNNVENVYN LGLIIFRDQV VRYGCIRDHL RQTLDMIAR ERKGEVVDRG</p> <p>AIRNACQMLM ILGLEGRSVY EEDFEAPFLE MSAEFFQMES QKFLAENSAS VYIKKVEARI</p> <p>NEEIERVMHC LDKSTEEPIV KVERELISK HMKTIVEMEN SGLVHMLKNG KTEDLACMYK</p> <p>LFSRVPNGLK TMCECMSCYL REQKALVSE EGEKPNVDY IQGLLDLKS FDRFLQESFN</p> <p>NDRLFQKQIA GDFEYFLNLN SRSPEYLSLF IDDKLKKGVK GLTEQEVETI LDKAMVLFRR</p> <p>MQEKDVFFERY YKQHLARRLL TNKSVSDDSE KNMISKLKTE CGCQFTSKLE GMFRDMSISN</p> <p>TTMDEFQRLH QATGVSLGGV DLTVRVLTG YWPTQSATPK CNIPPAPRHA FEIFRRFYLA</p> <p>KHSGRQLTLQ HHMGSADLNA TFYGPVKKED GSEVGVGGAQ VTGSNTRKHI LQVSTFQMTI</p> <p>LMLFNNREKY TFEEIQQETD IPERELVRAL QSLACGKPTQ RVLTKPKSK EIESGHIFTV</p> <p>NDQFTSKLHR VKIQTVAQK GESDPERKET RQKVDDDRKH EIEAAIVRIM KSRKKMQHNV</p>
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LVAEVTQQLK ARFLPSPVVI KKRIEGLIER EYLARTPEDR KVYTYVA

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Cul3 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. We use the ExPASy's protparam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility:

0.22 µm filtered

Endotoxin Level:

Protein is endotoxin free.

Product Details

Grade: Crystallography grade

Target Details

Target: Cullin 3 (CUL3)

Alternative Name: Cul3 ([CUL3 Products](#))

Background: Core component of multiple cullin-RING-based BCR (BTB-CUL3-RBX1) E3 ubiquitin-protein ligase complexes which mediate the ubiquitination and subsequent proteasomal degradation of target proteins. As a scaffold protein may contribute to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme. 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 (By similarity). The functional specificity of the BCR complex depends on the BTB domain-containing protein as the substrate recognition component. BCR(KLHL42) is involved in ubiquitination of KATNA1. BCR(SPOP) is involved in ubiquitination of BMI1/PCGF4, BRMS1, H2AFY and DAXX, GLI2 and GLI3. Can also form a cullin-RING-based BCR (BTB-CUL3-RBX1) E3 ubiquitin-protein ligase complex containing homodimeric SPOPL or the heterodimer formed by SPOP and SPOPL, these complexes have lower ubiquitin ligase activity. BCR(KLHL9-KLHL13) controls the dynamic behavior of AURKB on mitotic chromosomes and thereby coordinates faithful mitotic progression and completion of cytokinesis. BCR(KLHL3) acts as a regulator of ion transport in the distal nephron, by mediating ubiquitination of WNK4. The BCR(KLHL20) E3 ubiquitin ligase complex is involved in interferon response and anterograde Golgi to endosome transport: it mediates both ubiquitination leading to degradation and 'Lys-33'-linked ubiquitination. The BCR(KLHL21) E3 ubiquitin ligase complex regulates localization of the chromosomal passenger complex (CPC) from chromosomes to the spindle midzone in anaphase and mediates the ubiquitination of AURKB. The BCR(KLHL22) ubiquitin ligase complex mediates monoubiquitination of PLK1, leading to PLK1 dissociation from phosphoreceptor proteins and subsequent removal from kinetochores, allowing silencing of the spindle assembly checkpoint (SAC) and chromosome segregation. The BCR(KLHL25) ubiquitin ligase complex is involved in translational homeostasis by mediating ubiquitination and subsequent degradation of hypophosphorylated EIF4EBP1 (4E-BP1). Involved in ubiquitination of cyclin E and of cyclin D1 (in vitro) thus involved in regulation of G1/S transition (By similarity). Involved in the ubiquitination of KEAP1, ENC1 and KLHL41. BCR(KLHL12) is involved in ER-Golgi transport by regulating the size of COPII coats, thereby playing a key role in collagen export, which is required for embryonic stem (ES) cells division: BCR(KLHL12) acts by mediating monoubiquitination of SEC31 (SEC31A or SEC31B). In concert with ATF2 and RBX1, promotes

Target Details

degradation of KAT5 thereby attenuating its ability to acetylate and activate ATM (By similarity).
The BCR(KCTD17) E3 ubiquitin ligase complex mediates ubiquitination and degradation of TCHP, a down-regulator of cilium assembly, thereby inducing ciliogenesis (By similarity).
{ECO:0000250, ECO:0000250|UniProtKB:Q13618, ECO:0000269|PubMed:22358839}.

Molecular Weight: 89.8 kDa Including tag.

UniProt: [Q9JLV5](#)

Pathways: [M Phase](#)

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: Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: 100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

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