

Datasheet for ABIN3092074

DCLRE1C Protein (AA 1-692) (Strep Tag)



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1 Image

Overview

| | |
|-------------------------------|--|
| Quantity: | 1 mg |
| Target: | DCLRE1C |
| Protein Characteristics: | AA 1-692 |
| Origin: | Human |
| Source: | Tobacco (<i>Nicotiana tabacum</i>) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This DCLRE1C protein is labelled with Strep Tag. |
| Application: | ELISA, Western Blotting (WB), SDS-PAGE (SDS) |

Product Details

Sequence: MSSFEGQMAE YPTISIDRFD RENLRARAYF LSHCHKDHMK GLRAPTLKRR LECSLKVYLY
CSPVTKELLL TSPKYRFWKK RIISIEIETP TQISLVDEAS GEKEEIVVTL LPAGHCPGSV
MFLFQGNNGT VLYTGDFRLA QGEAARMELL HSGGRVKDIQ SVYLDTTFFCD PRFYQIPSRE
ECLSGVLELV RSWITRSPYH VVWLNCKAAY GYEYLFNTLS EELGVQVHVN KLDMFRNMPE
ILHHLTTDRN TQIHACRHPK AEEYFQWSKL PCGITSRNRI PLHIISIKPS TMWFGERSRK
TNVIVRTGES SYRACFSFHS SYSEIKDFLS YLCPVNAYPN VIPVGTTMDK VVEILKPLCR
SSQSTEPKYK PLGKLRART VHRDSEEDD YLFDDPLPIP LRHKVPYPET FHPEVFSMTA
VSEKQPEKLR QTPGCCRAEC MQSSRFTNFV DCEESNSESE EEVGIPASLQ GDLGSVLHLQ
KADGDVPQWE VFFKRNDIEIT DESLENFPSS TVAGGSQSPK LFSDSGEST HISSQNSSQS
THITEQGSQG WDSQSDTVLL SSQERNSGDI TSLDKADYRP TIKENIPASL MEQNVICPKD
TYSDLKSRDK DVTIVPSTGE PTTLSETHI PEEKSLLNLS TNADSQSSSD FEVPSTPEAE
LPKREHLQYL YEKLATGESI AVKKRKCSLL DT

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 (ALiCE®):

Product Details

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: DCLRE1C

Alternative Name: DCLRE1C ([DCLRE1C Products](#))

Background: Protein artemis (EC 3.1.-.-) (DNA cross-link repair 1C protein) (Protein A-SCID) (SNM1 homolog C) (hSNM1C) (SNM1-like protein),FUNCTION: Nuclease involved in DNA non-homologous end joining (NHEJ), required for double-strand break repair and V(D)J recombination (PubMed:11336668, PubMed:11955432, PubMed:12055248, PubMed:14744996, PubMed:15071507, PubMed:15574326, PubMed:15936993). Required for V(D)J recombination, the process by which exons encoding the antigen-binding domains of immunoglobulins and T-cell receptor proteins are assembled from individual V, (D), and J gene segments (PubMed:11336668, PubMed:11955432, PubMed:14744996). V(D)J recombination is initiated by the lymphoid specific RAG endonuclease complex, which generates site specific DNA double strand breaks (DSBs) (PubMed:11336668, PubMed:11955432, PubMed:14744996). These DSBs present two types of DNA end structures: hairpin sealed coding ends and phosphorylated blunt signal ends (PubMed:11336668, PubMed:11955432, PubMed:14744996). These ends are independently repaired by the non homologous end joining (NHEJ) pathway to form coding and signal joints respectively (PubMed:11336668, PubMed:11955432, PubMed:14744996). This protein exhibits single-strand specific 5'-3' exonuclease activity in isolation and acquires endonucleolytic activity on 5' and 3' hairpins and overhangs when in a complex with PRKDC (PubMed:15071507, PubMed:15574326, PubMed:11955432, PubMed:15936993). The latter activity is required specifically for the resolution of closed hairpins prior to the formation of the coding joint (PubMed:11955432). Also required for the repair of complex DSBs induced by ionizing radiation, which require substantial end-processing prior to religation by NHEJ (PubMed:15456891, PubMed:15468306, PubMed:15574327, PubMed:15811628). {ECO:0000269|PubMed:11336668, ECO:0000269|PubMed:11955432,

Target Details

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ECO:0000269|PubMed:15574327, ECO:0000269|PubMed:15811628,
ECO:0000269|PubMed:15936993}.

Molecular Weight: 78.4 kDa

UniProt: [Q96SD1](#)

Pathways: [DNA Damage Repair](#)

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.

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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.

Handling

Expiry Date: Unlimited (if stored properly)

Images



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