

Datasheet for ABIN3092139

DEPDC5 Protein (AA 1-1603) (Strep Tag)



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Overview

Quantity:	1 mg
Target:	DEPDC5
Protein Characteristics:	AA 1-1603
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This DEPDC5 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence: MRTTKVYKLV IHKKGFGGSD DELVVNPKVF PHIKLGDIVE IAHPNDEYSP LLLQVKSLKE
DLQKETISVD QTVTQVFRLR PYQDVYVNVV DPKDVTLDLV ELTFKDQYIG RGDMMWRLKKS
LVSTCAYITQ KVEFAGIRAQ AGELWVKNEK VMCYISED T RVVFRSTSAM VYIFIQMSCE
MWFDFIYGDL YFEKAVNGFL ADLFTKWKEK NCSHEVTVVL FSRTFYDAKS VDEFPEINRA
SIRQDHKGRF YEDFYKVVVQ NERREEWTS L LVTIKKLFIQ YPVLVRLEQA EGFPQGDNST
SAQGNYLEAI NLSFNVFDKH YINRNFDR TG QMSVVITPGV GVFEVDRLLM ILTKQRMIDN
GIGVDLVC MG EQPLHAVPLF KLHNRSAPRD SRLGDDYNIP HWINHSFYTS KSQ LFCNSFT
PRIKLAGKKP ASEKAKNGRD TSLGSPKESE NALPIQVDYD AYDAQVFRLP GPSRAQCLTT
CRSVRERESH SRKSASSCDV SSSPSLPSRT LPTEEVRSQA SDDSSLGKSA NILMIPPHL
HQYEVSSSLG YTSTRDVLEN MMEPPQRDSS APGRFHV GSA ESMLHVRPGG YTPQRALINP
FAPSRMPMKL TSNRRRWHT FPVGPSGEAI QIHHQTRQNM AELQSGQQRD PTHSSAELLE
LAYHEAAGR H SNSRQPGDGM SFLNFSGTEE LSVGLLSNSG AGMNPRTQNK DSLEDSVSTS

PDPILTLSAP PVVPGFCCTV GVDWKSLLTP ACLPLTTDYF PDRQGLQNDY TEGCYDLLPE
ADIDRRDEDG VQMTAQQVFE EFICQRLMQG YQIIVQPKTQ KPNPAVPPPL SSSPLYSRGL
VSRNRPEEED QYWLSMGRFT HKVTLKDKMI TVTRYLPKYP YESAQIHITY SLCPSHSDSE
FVSCWVEFSH ERLEEYKWNY LDQYICSAGS EDFSLIESLK FWRTRFLLLP ACVTATKRIT
EGEAHCDIYG DRPRADEDEW QLLDGFVRFV EGLNRIRRRH RSDRMMRKGT AMKGLQMTGP
ISTHSLESTA PPVGKKGTSAL SALLEMEAS QKCLGEQQAA VHGGKSSAQS AESSVAMTP
TYMDSRPRKDG AFFMEFVRSP RTASSAFYPQ VSDQATATPM LDGTSLGICT GQSMDRGNSQ
TFGNSQNIGE QGYSSTNSSD SSSQQLVASS LTSSSTLTEI LEAMKHPSTG VQLLSEQKGL
SPYCFISAEV VHVLVNHVEG IQTQAMAIDI MQKMLEEQLI THASGEAWRT FIYGFYFYKI
VTDKEPDRVA MQQPATTWHT AGVDDFASFQ RKWFEVAFVA EELVHSEIPA FLLPWLPSPR
ASYASRHSSS SRSFGGRSQA AALLAATVPE QRTVTLDVDV NNRTDRLEWC SCYYHGNFSL
NAAFEIKLHW MAVTAAVLFE MVQGWHRKAT SCGFLLVPVL EGPFALPSYL YGDPLRAQLF
IPLNISCLLK EGSEHLFDSF EPETYWDRMH LFQEIAHHRF GFVQDKYSAS AFNFAENKP
QYIHVTGTVF LQLPYSKRKF SGQRRRRNS TSSTNQNMFC EERVGYNWAY NTMLTKTWRS
SATGDEKFAD RLLKDFTDFC INRDNRVTF WTSCLEKMHA SAP

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-

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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®): <ol style="list-style-type: none">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:	DEPDC5
Alternative Name:	DEPDC5 (DEPDC5 Products)
Background:	GATOR1 complex protein DEPDC5 (DEP domain-containing protein 5),FUNCTION: As a component of the GATOR1 complex functions as an inhibitor of the amino acid-sensing branch of the mTORC1 pathway (PubMed:23723238, PubMed:25457612, PubMed:29769719, PubMed:31548394, PubMed:29590090, PubMed:35338845). In response to amino acid depletion, the GATOR1 complex has GTPase activating protein (GAP) activity and strongly increases GTP hydrolysis by RagA/RRAGA (or RagB/RRAGB) within heterodimeric Rag complexes, thereby turning them into their inactive GDP-bound form, releasing mTORC1 from

Target Details

lysosomal surface and inhibiting mTORC1 signaling (PubMed:23723238, PubMed:25457612, PubMed:29769719, PubMed:29590090, PubMed:35338845). In the presence of abundant amino acids, the GATOR1 complex is negatively regulated by GATOR2, the other GATOR subcomplex, in this amino acid-sensing branch of the TORC1 pathway (PubMed:23723238, PubMed:25457612, PubMed:29769719). Within the GATOR1 complex, DEPDC5 mediates direct interaction with the nucleotide-binding pocket of small GTPases Rag (RagA/RRAGA, RagB/RRAGB, RagC/RRAGC and/or RagD/RRAGD) and coordinates their nucleotide loading states by promoting RagA/RRAGA or RagB/RRAGB into their GDP-binding state and RagC/RRAGC or RagD/RRAGD into their GTP-binding state (PubMed:29590090, PubMed:35338845). However, it does not execute the GAP activity, which is mediated by NPRL2 (PubMed:29590090). {ECO:0000269|PubMed:23723238, ECO:0000269|PubMed:25457612, ECO:0000269|PubMed:29590090, ECO:0000269|PubMed:29769719, ECO:0000269|PubMed:31548394, ECO:0000269|PubMed:35338845}.

Molecular Weight: 181.3 kDa

UniProt: [O75140](#)

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.
Expiry Date:	Unlimited (if stored properly)

Images



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