Datasheet for ABIN3092537

EXOSC10 Protein (AA 1-885) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	EXOSC10
Protein Characteristics:	AA 1-885
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This EXOSC10 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MAPPSTREPR VLSATSATKS DGEMVLPGFP DADSFVKFAL GSVVAVTKAS GGLPQFGDEY DFYRSFPGFQ AFCETQGDRL LQCMSRVMQY HGCRSNIKDR SKVTELEDKF DLLVDANDVI LERVGILLDE ASGVNKNQQP VLPAGLQVPK TVVSSWNRKA AEYGKKAKSE TFRLLHAKNI IRPQLKFREK IDNSNTPFLP KIFIKPNAQK PLPQALSKER RERPQDRPED LDVPPALADF IHQQRTQQVE QDMFAHPYQY ELNHFTPADA VLQKPQPQLY RPIEETPCHF ISSLDELVEL NEKLLNCQEF AVDLEHHSYR SFLGLTCLMQ ISTRTEDFII DTLELRSDMY ILNESLTDPA IVKVFHGADS DIEWLQKDFG LYVVNMFDTH QAARLLNLGR HSLDHLLKLY CNVDSNKQYQ LADWRIRPLP EEMLSYARDD THYLLYIYDK MRLEMWERGN GQPVQLQVVW QRSRDICLKK FIKPIFTDES YLELYRKQKK HLNTQQLTAF QLLFAWRDKT ARREDESYGY VLPNHMMLKI AEELPKEPQG IIACCNPVPP LVRQQINEMH LLIQQAREMP LLKSEVAAGV KKSGPLPSAE RLENVLFGPH DCSHAPPDGY PIIPTSGSVP VQKQASLFPD EKEDNLLGTT CLIATAVITL FNEPSAEDSK KGPLTVAQKK AQNIMESFEN PFRMFLPSLG HRAPVSQAAK FDPSTKIYEI

SNRWKLAQVQ VQKDSKEAVK KKAAEQTAAR EQAKEACKAA AEQAISVRQQ VVLENAAKKR ERATSDPRTT EQKQEKKRLK ISKKPKDPEP PEKEFTPYDY SQSDFKAFAG NSKSKVSSQF DPNKQTPSGK KCIAAKKIKQ SVGNKSMSFP TGKSDRGFRY NWPQR

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.

Product Details

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:	EXOSC10
Alternative Name:	EXOSC10 (EXOSC10 Products)
Background:	Exosome complex component 10 (EC 3.1.13.-) (Autoantigen PM/Scl 2) (P100 polymyositis-scleroderma overlap syndrome-associated autoantigen) (Polymyositis/scleroderma autoantigen 100 kDa) (PM/Scl-100) (Polymyositis/scleroderma autoantigen 2),FUNCTION: Catalytic component of the RNA exosome complex which has 3'->5' exoribonuclease activity and participates in a multitude of cellular RNA processing and degradation events. In the nucleus, the RNA exosome complex is involved in proper maturation of stable RNA species such as rRNA, snRNA and snoRNA, in the elimination of RNA processing by-products and non-coding 'pervasive' transcripts, such as antisense RNA species and promoter-upstream transcripts (PROMPTs), and of mRNAs with processing defects, thereby limiting or excluding their export to the cytoplasm. Part of the small subunit (SSU) processome, first precursor of the small eukaryotic ribosomal subunit. During the assembly of the SSU processome in the nucleolus, many ribosome biogenesis factors, an RNA chaperone and ribosomal proteins associate with the nascent pre-rRNA and work in concert to generate RNA folding, modifications, rearrangements and cleavage as well as targeted degradation of pre-ribosomal RNA by the RNA exosome (PubMed:34516797). The RNA exosome may be involved in Ig class switch recombination (CSR) and/or Ig variable region somatic hypermutation (SHM) by targeting AICDA deamination activity to transcribed dsDNA substrates. In the cytoplasm, the RNA exosome complex is involved in general mRNA turnover and specifically degrades inherently unstable mRNAs containing AU-rich elements (AREs) within their 3' untranslated regions, and in RNA surveillance pathways, preventing translation of aberrant mRNAs. It seems

Target Details

	to be involved in degradation of histone mRNA. EXOSC10 is required for nucleolar localization of C1D and probably mediates the association of MTREX, C1D and MPHOSPH6 with the RNA exosome involved in the maturation of 5.8S rRNA. Plays a role in the recruitment of replication protein A complex (RPA) and RAD51 to DNA double-strand breaks caused by irradiation, contributing to DNA repair by homologous recombination (PubMed:31086179, PubMed:25632158). Regulates levels of damage-induced RNAs in order to prevent DNA-RNA hybrid formation at DNA double-strand breaks and limit DNA end resection after damage (PubMed:31086179). Plays a role in oocyte development, maturation and survival (By similarity). Required for normal testis development and mitotic division of spermatogonia (By similarity). Plays a role in proper embryo development (By similarity). Required for global protein translation (PubMed:36912080, PubMed:26857222). Required for cell proliferation (PubMed:36912080). Regulates metabolism of C9orf72-derived repeat RNA that can be translated into toxic dipeptide repeat proteins (PubMed:32830871). {ECO:0000250|UniProtKB:P56960, ECO:0000269|PubMed:14527413, ECO:0000269|PubMed:16455498, ECO:0000269|PubMed:17412707, ECO:0000269|PubMed:17545563, ECO:0000269|PubMed:18172165, ECO:0000269|PubMed:19056938, ECO:0000269|PubMed:20368444, ECO:0000269|PubMed:20699273, ECO:0000269|PubMed:25632158, ECO:0000269|PubMed:26857222, ECO:0000269|PubMed:31086179, ECO:0000269|PubMed:32830871, ECO:0000269|PubMed:34516797, ECO:0000269|PubMed:36912080}.
Molecular Weight:	100.8 kDa
UniProt:	Q01780

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

Application Details

	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

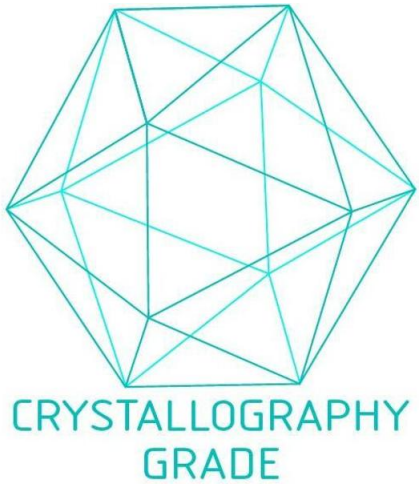

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process