Datasheet for ABIN3095067

POLR3B Protein (AA 1-1133) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	POLR3B
Protein Characteristics:	AA 1-1133
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This POLR3B protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MDVLAEEFGN LTPEQLAAPI PTVEEKWRLL PAFLKVKGLV KQHIDSFNYF INVEIKKIMK ANEKVTSDAD PMWYLKYLNI YVGLPDVEES FNVTRPVSPH ECRLRDMTYS APITVDIEYT RGSQRIIRNA LPIGRMPIML RSSNCVLTGK TPAEFAKLNE CPLDPGGYFI VKGVEKVILI QEQLSKNRII VEADRKGAVG ASVTSSTHEK KSRTNMAVKQ GRFYLRHNTL SEDIPIVIIF KAMGVESDQE IVQMIGTEEH VMAAFGPSLE ECQKAQIFTQ MQALKYIGNK VRRQRMWGGG PKKTKIEEAR ELLASTILTH VPVKEFNFRA KCIYTAVMVR RVILAQGDNK VDDRDYYGNK RLELAGQLLS LLFEDLFKKF NSEMKKIADQ VIPKQRAAQF DVVKHMRQDQ ITNGMVNAIS TGNWSLKRFK MDRQGVTQVL SRLSYISALG MMTRISSQFE KTRKVSGPRS LQPSQWGMLC PSDTPEGEAC GLVKNLALMT HITTDMEDGP IVKLASNLGV EDVNLLCGEE LSYPNVFLVF LNGNILGVIR DHKKLVNTFR LMRRAGYINE FVSISTNLTD RCVYISSDGG RLCRPYIIVK KQKPAVTNKH MEELAQGYRN FEDFLHESLV EYLDVNEEND CNIALYEHTI NKDTTHLEIE PFTLLGVCAG LIPYPHHNQS PRNTYQCAMG KQAMGTIGYN QRNRIDTLMY LLAYPQKPMV

KTKTIELIEF EKLPAGQNAT VAVMSYSGYD IEDALVLNKA SLDRGFGRCL VYKNAKCTLK RYTNQTFDKV MGPMLDAATR KPIWRHEILD ADGICSPGEK VENKQVLVNK SMPTVTQIPL EGSNVPQQPQ YKDVPITYKG ATDSYIEKVM ISSNAEDAFL IKMLLRQTRR PEIGDKFSSR HGQKGVCGLI VPQEDMPFCD SGICPDIIMN PHGFPSRMTV GKLIELLAGK AGVLDGRFHY GTAFGGSKVK DVCEDLVRHG YNYLGKDYVT SGITGEPLEA YIYFGPVYYQ KLKHMVLDKM HARARGPRAV LTRQPTEGRS RDGGLRLGEM ERDCLIGYGA SMLLLERLMI SSDAFEVDVC GQCGLLGYSG WCHYCKSSCH VSSLRIPYAC KLLFQELQSM NIIPRLKLSK YNE

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:

Product Details

- 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®): 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:	POLR3B
Alternative Name:	POLR3B (POLR3B Products)
Background:	DNA-directed RNA polymerase III subunit RPC2 (RNA polymerase III subunit C2) (EC 2.7.7.6) (C128) (DNA-directed RNA polymerase III 127.6 kDa polypeptide) (DNA-directed RNA polymerase III subunit B),FUNCTION: Catalytic core component of RNA polymerase III (Pol III), a DNA-dependent RNA polymerase which synthesizes small non-coding RNAs using the four ribonucleoside triphosphates as substrates. Synthesizes 5S rRNA, snRNAs, tRNAs and miRNAs from at least 500 distinct genomic loci (PubMed:20413673, PubMed:33558766). Pol III-mediated transcription cycle proceeds through transcription initiation, transcription elongation and transcription termination stages. During transcription initiation, Pol III is recruited to DNA promoters type I, II or III with the help of general transcription factors and other specific initiation factors. Once the polymerase has escaped from the promoter it enters the elongation phase during which RNA is actively polymerized, based on complementarity with the template DNA strand. Transcription termination involves the release of the RNA transcript and polymerase from the DNA (PubMed:20413673, PubMed:33335104, PubMed:33674783, PubMed:34675218, PubMed:33558764, PubMed:33558766). Forms Pol III active center together with the largest subunit POLR3A/RPC1. A single-stranded DNA template strand of the

Target Details

	promoter is positioned within the central active site cleft of Pol III. Appends one nucleotide at a time to the 3' end of the nascent RNA, with POLR3A/RPC1 contributing a Mg(2+)-coordinating DxDGD motif, and POLR3B/RPC2 participating in the coordination of a second Mg(2+) ion and providing lysine residues believed to facilitate Watson-Crick base pairing between the incoming nucleotide and template base. Typically, Mg(2+) ions direct a 5' nucleoside triphosphate to form a phosphodiester bond with the 3' hydroxyl of the preceding nucleotide of the nascent RNA, with the elimination of pyrophosphate (PubMed:19609254, PubMed:33335104, PubMed:33674783, PubMed:34675218, PubMed:33558764, PubMed:20413673). Pol III plays a key role in sensing and limiting infection by intracellular bacteria and DNA viruses. Acts as a nuclear and cytosolic DNA sensor involved in innate immune response. Can sense non-self dsDNA that serves as template for transcription into dsRNA. The non-self RNA polymerase III transcripts, such as Epstein-Barr virus-encoded RNAs (EBERs) induce type I interferon and NF-kappa-B through the RIG-I pathway. {ECO:0000250, ECO:0000269|PubMed:19609254, ECO:0000269|PubMed:19631370, ECO:0000269|PubMed:20413673, ECO:0000269|PubMed:33335104, ECO:0000269|PubMed:33558764, ECO:0000269|PubMed:33558766, ECO:0000269|PubMed:33674783, ECO:0000269|PubMed:34675218}.
Molecular Weight:	127.8 kDa
UniProt:	Q9NW08

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!

Application Details

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

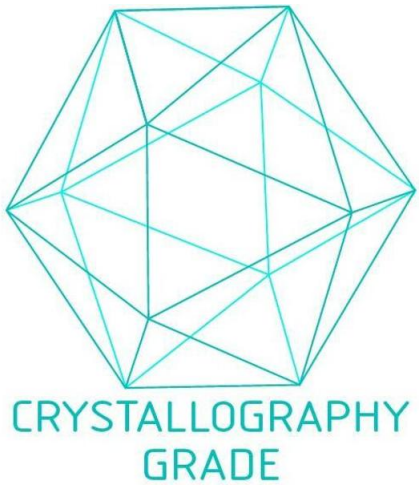

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process