Datasheet for ABIN7555258

POLR1B Protein (AA 1-1135) (His tag)

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Overview

Quantity:	1 mg
Target:	POLR1B
Protein Characteristics:	AA 1-1135
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This POLR1B protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant POLR1B Protein expressed in mammalian cells.
Sequence:	MDPGSRWRNL PSGPSLKHLT DPSYGIPREQ QKAALQELTR AHVESFNYAV HEGLGLAVQA IPPFEFAFKD ERISFTILDA VISPPTVPKG TICKEANVYP AECRGRRSTY RGKLTADINW AVNGISKGII KQFLGYVPIM VKSKLCNLRN LPPQALIEHH EEAEEMGGYF IINGIEKVIR MLIMPRRNFP IAMIRPKWKT RGPGYTQYGV SMHCVREEHS AVNMNLHYLE NGTVMLNFIY RKELFFLPLG FALKALVSFS DYQIFQELIK GKEDDSFLRN SVSQMLRIVM EEGCSTQKQV LNYLGECFRV KLNVPDWYPN EQAAEFLFNQ CICIHLKSNT EKFYMLCLMT RKLFALAKGE CMEDNPDSLV NQEVLTPGQL FLMFLKEKLE GWLVSIKIAF DKKAQKTSVS MNTDNLMRIF TMGIDLTKPF EYLFATGNLR SKTGLGLLQD SGLCVVADKL NFIRYLSHFR CVHRGADFAK MRTTTVRRLL PESWGFLCPV HTPDGEPCGL MNHLTAVCEV VTQFVYTASI PALLCNLGVT PIDGAPHRSY SECYPVLLDG VMVGWVDKDL APGIADSLRH FKVLREKRIP PWMEVVLIPM TGKPSLYPGL FLFTTPCRLV RPVQNLALGK EELIGTMEQI FMNVAIFEDE VFAGVTTHQE LFPHSLLSVI ANFIPFSDHN QSPRNMYQCQ MGKQTMGFPL LTYQDRSDNK LYRLQTPQSP

Product Details

	LVRPSMYDYY DMDNYPIGTN AIVAVISYTG YDMEDAMIVN KASWERGFAH GSVYKSEFID LSEKIKQGDS SLVFGIKPGD PRVLQKLDDD GLPFIGAKLQ YGDPYYSYLN LNTGESFVMY YKSKENCVVD NIKVCSNDTG SGKFKCVCIT MRVPRNPTIG DKFASRHGQK GILSRLWPAE DMPFTESGMV PDILFNPHGF PSRMTIGMLI ESMAGKSAAL HGLCHDATPF IFSEENSALE YFGEMLKAAG YNFYGTERLY SGISGLELEA DIFIGVVYYQ RLRHMVSDKF QVRTTGARDR VTNQPIGGRN VQGGIRFGEM ERDALLAHGT SFLLHDRLFN CSDRSVAHVC VKCGSLLSPL LEKPPPSWSA MRNRKYNCTL CSRSDTIDTV SVPYVFRYFV AELAAMNIKV KLDVV **Sequence without tag. The proposed Purification-Tag is based on experiences 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.**
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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 try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	POLR1B
Alternative Name:	POLR1B (POLR1B Products)
Background:	DNA-directed RNA polymerase I subunit RPA2 (RNA polymerase I subunit 2) (EC 2.7.7.6) (DNA-

	directed RNA polymerase I 135 kDa polypeptide) (RPA135),FUNCTION: Catalytic core component of RNA polymerase I (Pol I), a DNA-dependent RNA polymerase which synthesizes ribosomal RNA precursors using the four ribonucleoside triphosphates as substrates. Transcribes 47S pre-rRNAs from multicopy rRNA gene clusters, giving rise to 5.8S, 18S and 28S ribosomal RNAs (PubMed:34671025, PubMed:34887565, PubMed:36271492, PubMed:11250903, PubMed:11283244, PubMed:16858408). Pol I-mediated transcription cycle proceeds through transcription initiation, transcription elongation and transcription termination stages. During transcription initiation, Pol I pre-initiation complex (PIC) is recruited by the selectivity factor 1 (SL1/TIF-IB) complex bound to the core promoter that precedes an rDNA repeat unit. The PIC assembly bends the promoter favoring the formation of the transcription bubble and promoter escape. 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. Highly processive, assembles in structures referred to as 'Miller trees' where many elongating Pol I complexes queue and transcribe the same rDNA coding regions. At terminator sequences downstream of the rDNA gene, PTRF interacts with Pol I and halts Pol I transcription leading to the release of the RNA transcript and polymerase from the DNA (PubMed:34671025, PubMed:34887565, PubMed:36271492, PubMed:11250903, PubMed:11283244, PubMed:16858408). Forms Pol I active center together with the largest subunit POLR1A/RPA1. Appends one nucleotide at a time to the 3' end of the nascent RNA, with POLR1A/RPA1 contributing a Mg(2+)-coordinating DxDGD motif, and POLR1B/RPA2 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 the 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. Has proofreading activity: Pauses and backtracks to allow the cleavage of a missincorporated nucleotide via POLR1H/RPA12. High Pol I processivity is associated with decreased transcription fidelity (PubMed:34671025, PubMed:34887565, PubMed:36271492, PubMed:11250903, PubMed:11283244, PubMed:16858408, PubMed:16809778) (By similarity). {ECO:0000250|UniProtKB:P10964, ECO:0000269|PubMed:11250903, ECO:0000269|PubMed:11283244, ECO:0000269|PubMed:16809778, ECO:0000269|PubMed:16858408, ECO:0000269|PubMed:34671025, ECO:0000269|PubMed:34887565, ECO:0000269|PubMed:36271492}.
Molecular Weight:	128.2 kDa
UniProt:	Q9H9Y6

Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition 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:	12 months