Datasheet for ABIN3092939

DNA Helicase B Protein (HELB) (AA 1-1087) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	DNA Helicase B (HELB)
Protein Characteristics:	AA 1-1087
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This DNA Helicase B protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence:	MARSSPYLRQ LQGPLLPPRD LVEEDDDYLN DDVEEDEESV FIDAEELCSG GVKAGSLPGC LRVSICDENT QETCKVFGRF PITGAWWRVK VQVKPVVGSR SYQYQVQGFP SYFLQSDMSP PNQKHICALF LKECEVSSDD VNKFLTWVKE VSNYKNLNFE NLRETLRTFH KETGRKDQKQ PTQNGQEELF LDNEMSLPLE NTIPFRNVMT ALQFPKIMEF LPVLLPRHFK WIIGSGSKEM LKEIEEILGT HPWKLGFSKI TYREWKLLRC EASWIAFCQC ESLLQLMTDL EKNALIMYSR LKQICREDGH TYVEVNDLTL TLSNHMSFHA ASESLKFLKD IGVVTYEKSC VFPYDLYHAE RAIAFSICDL MKKPPWHLCV DVEKVLASIH TTKPENSSDD ALNESKPDEV RLENPVDVVD TQDNGDHIWT NGENEINAEI SEVQLDQDQV EVPLDRDQVA ALEMICSNPV TVISGKGGCG KTTIVSRLFK HIEQLEEREV KKACEDFEQD QNASEEWITF TEQSQLEADK AIEVLLTAPT GKAAGLLRQK TGLHAYTLCQ VNYSFYSWTQ TMMTTNKPWK FSSVRVLVVD EGSLVSVGIF KSVLNLLCEH SKLSKLIILG DIRQLPSIEP GNLLKDLFET LKSRNCAIEL KTNHRAESQL IVDNATRISR RQFPKFDAEL NISDNPTLPI SIQDKTFIFV RLPEEDASSQ SSKTNHHSCL

YSAVKTLLQE NNLQNAKTSQ FIAFRRQDCD LINDCCCKHY TGHLTKDHQS RLVFGIGDKI CCTRNAYLSD LLPENISGSQ QNNDLDASSE DFSGTLPDFA KNKRDFESNV RLCNGEIFFI TNDVTDVTFG KRRSLTINNM AGLEVTVDFK KLMKYCRIKH AWARTIHTFQ GSEEQTVVYV VGKAGRQHWQ HVYTAVTRGR CRVYVIAEES QLRNAIMKNS FPRKTRLKHF LQSKLSSSGA PPADFPSPRK SSGDSGGPST PSASPLPVVT DHAMTNDVTW SEASSPDERT LTFAERWQLS SPDGVDTDDD LPKSRASKRT CGVNDDESPS KIFMVGESPQ VSSRLQNLRL NNLIPRQLFK PTDNQET

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:	DNA Helicase B (HELB)
Alternative Name:	HELB (HELB Products)
Background:	DNA helicase B (hDHB) (EC 3.6.4.12),FUNCTION: 5'-3' DNA helicase involved in DNA damage response by acting as an inhibitor of DNA end resection (PubMed:25617833, PubMed:26774285). Recruitment to single-stranded DNA (ssDNA) following DNA damage leads to inhibit the nucleases catalyzing resection, such as EXO1, BLM and DNA2, possibly via the 5'-3' ssDNA translocase activity of HELB (PubMed:26774285). As cells approach S phase, DNA end resection is promoted by the nuclear export of HELB following phosphorylation (PubMed:26774285). Acts independently of TP53BP1 (PubMed:26774285). Unwinds duplex DNA with 5'-3' polarity. Has single-strand DNA-dependent ATPase and DNA helicase activities. Prefers ATP and dATP as substrates (PubMed:12181327). During S phase, may facilitate cellular recovery from replication stress (PubMed:22194613). {ECO:0000269|PubMed:12181327, ECO:0000269|PubMed:22194613, ECO:0000269|PubMed:25617833, ECO:0000269|PubMed:26774285}.
Molecular Weight:	123.3 kDa
UniProt:	Q8NG08

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)