Datasheet for ABIN3092380

ERCC6 Protein (AA 1-1493) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	ERCC6
Protein Characteristics:	AA 1-1493
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ERCC6 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS)

Product Details

Sequence:	MPNEGIPHSS QTQEQDCLQS QPVSNNEEMA IKQESGGDGE VEEYLSFRSV GDGLSTSAVG CASAAPRRGP ALLHIDRHQI QAVEPSAQAL ELQGLGVDVY DQDVLEQGVL QQVDNAIHEA SRASQLVDVE KEYRSVLDDL TSCTTSLRQI NKIIEQLSPQ AATSRDINRK LDSVKRQKYN KEQQLKKITA KQKHLQAILG GAEVKIELDH ASLEEDAEPG PSSLGSMLMP VQETAWEELI RTGQMTPFGT QIPQKQEKKP RKIMLNEASG FEKYLADQAK LSFERKKQGC NKRAARKAPA PVTPPAPVQN KNKPNKKARV LSKKEERLKK HIKKLQKRAL QFQGKVGLPK ARRPWESDMR PEAEGDSEGE ESEYFPTEEE EEEEDDEVEG AEADLSGDGT DYELKPLPKG GKRQKKVPVQ EIDDDFFPSS GEEAEAASVG EGGGGGRKVG RYRDDGDEDY YKQRLRRWNK LRLQDKEKRL KLEDDSEESD AEFDEGFKVP GFLFKKLFKY QQTGVRWLWE LHCQQAGGIL GDEMGLGKTI QIIAFLAGLS YSKIRTRGSN YRFEGLGPTV IVCPTTVMHQ WVKEFHTWWP PFRVAILHET GSYTHKKEKL IRDVAHCHGI LITSYSYIRL MQDDISRYDW HYVILDEGHK IRNPNAAVTL ACKQFRTPHR IILSGSPMQN NLRELWSLFD FIFPGKLGTL PVFMEQFSVP ITMGGYSNAS

PVQVKTAYKC ACVLRDTINP YLLRRMKSDV KMSLSLPDKN EQVLFCRLTD EQHKVYQNFV DSKEVYRILN GEMQIFSGLI ALRKICNHPD LFSGGPKNLK GLPDDELEED QFGYWKRSGK MIVVESLLKI WHKQGQRVLL FSQSRQMLDI LEVFLRAQKY TYLKMDGTTT IASRQPLITR YNEDTSIFVF LLTTRVGGLG VNLTGANRVV IYDPDWNPST DTQARERAWR IGQKKQVTVY RLLTAGTIEE KIYHRQIFKQ FLTNRVLKDP KQRRFFKSND LYELFTLTSP DASQSTETSA IFAGTGSDVQ TPKCHLKRRI QPAFGADHDV PKRKKFPASN ISVNDATSSE EKSEAKGAEV NAVTSNRSDP LKDDPHMSSN VTSNDRLGEE TNAVSGPEEL SVISGNGECS NSSGTGKTSM PSGDESIDEK LGLSYKRERP SQAQTEAFWE NKQMENNFYK HKSKTKHHSV AEEETLEKHL RPKQKPKNSK HCRDAKFEGT RIPHLVKKRR YQKQDSENKS EAKEQSNDDY VLEKLFKKSV GVHSVMKHDA IMDGASPDYV LVEAEANRVA QDALKALRLS RQRCLGAVSG VPTWTGHRGI SGAPAGKKSR FGKKRNSNFS VQHPSSTSPT EKCQDGIMKK EGKDNVPEHF SGRAEDADSS SGPLASSSLL AKMRARNHLI LPERLESESG HLQEASALLP TTEHDDLLVE MRNFIAFQAH TDGQASTREI LQEFESKLSA SQSCVFRELL RNLCTFHRTS GGEGIWKLKP EYC

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

Product Details

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®): 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)

Target Details

Target:	ERCC6
Alternative Name:	ERCC6 (ERCC6 Products)
Background:	DNA excision repair protein ERCC-6 (EC 3.6.4.-) (ATP-dependent helicase ERCC6) (Cockayne syndrome protein CSB),FUNCTION: Essential factor involved in transcription-coupled nucleotide excision repair which allows RNA polymerase II-blocking lesions to be rapidly removed from the transcribed strand of active genes (PubMed:20541997, PubMed:26620705, PubMed:16246722). Upon DNA-binding, it locally modifies DNA conformation by wrapping the DNA around itself, thereby modifying the interface between stalled RNA polymerase II and DNA (PubMed:15548521). It is required for transcription-coupled repair complex formation (PubMed:16916636). It recruits the CSA complex (DCX(ERCC8) complex), nucleotide excision repair proteins and EP300 to the sites of RNA polymerase II-blocking lesions (PubMed:16916636). Plays an important role in regulating the choice of the DNA double-strand

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	breaks (DSBs) repair pathway and G2/M checkpoint activation, DNA-dependent ATPase activity is essential for this function (PubMed:25820262). Regulates the DNA repair pathway choice by inhibiting non-homologous end joining (NHEJ), thereby promoting the homologous recombination (HR)-mediated repair of DSBs during the S/G2 phases of the cell cycle (PubMed:25820262). Mediates the activation of the ATM- and CHEK2-dependent DNA damage responses thus preventing premature entry of cells into mitosis following the induction of DNA DSBs (PubMed:25820262). Acts as a chromatin remodeler at DSBs, DNA-dependent ATPase-dependent activity is essential for this function. Remodels chromatin by evicting histones from chromatin flanking DSBs, limiting RIF1 accumulation at DSBs thereby promoting BRCA1-mediated HR (PubMed:29203878). Required for stable recruitment of ELOA and CUL5 to DNA damage sites (PubMed:28292928). Involved in UV-induced translocation of ERCC8 to the nuclear matrix (PubMed:26620705). Essential for neuronal differentiation and neuritogenesis, regulates transcription and chromatin remodeling activities required during neurogenesis (PubMed:24874740). {ECO:0000269|PubMed:15548521, ECO:0000269|PubMed:16246722, ECO:0000269|PubMed:16916636, ECO:0000269|PubMed:20541997, ECO:0000269|PubMed:22483866, ECO:0000269|PubMed:24874740, ECO:0000269|PubMed:25820262, ECO:0000269|PubMed:26620705, ECO:0000269|PubMed:28292928, ECO:0000269|PubMed:29203878}.
Molecular Weight:	168.4 kDa
UniProt:	Q03468
Pathways:	DNA Damage Repair, Chromatin Binding

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

Application Details

	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)

