Datasheet for ABIN3131323

ERCC2 Protein (AA 1-760) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	ERCC2
Protein Characteristics:	AA 1-760
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ERCC2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MKLNVDGLLV YFPYDYIYPE QFSYMLELKR TLDAKGHGVL EMPSGTGKTV SLLALIVAYQ RAYPLEVTKL IYCSRTVPEI EKVIEELRKL LSFYEQQEGE KLPFLGLALS SRKNLCIHPE VTPLRFGKDV DGKCHSLTAS YVRAQYQQDA SLPHCRFYEE FDIHGRQMPL PAGIYNLDDL KALGQRQGWC PYFLARYSIL HANVVVYSYH YLLDPKIADL VSKELARKAV VVFDEAHNID NVCIDSMSVN LTRRTLDRCQ SNLDTLQKTV LRIKETDEQR LRDEYRRLVE GLREASVARE TDAHLANPVL PDEVLQEAVP GSIRTAEHFL GFLRRLLEYV KWRLRVQHVV QESPPAFLSG LAQRVCIQRK PLRFCAERLR SLLHTLEIAD LADFSPLTLL ANFATLVSTY AKGFTIIIEP FDDRTPTIAN PVLHFSCMDA SLAIKPVFER FQSVIITSGT LSPLDIYPKI LDFHPVTMAT FTMTLARVCL CPMIIGRGND QVAISSKFET REDIAVIRNY GNLLLEMSAV VPDGIVAFFT SYQYMESTVA SWYEQGILEN IQRNKLLFIE TQDGAETSVA LEKYQEACEN GRGAILLSVA RGKVSEGIDF VHHYGRAVIM FGVPYVYTQS RILKARLEYL RDQFQIREND FLTFDAMRHA AQCVGRAIRG KTDYGLMVFA DKRFARADKR GKLPRWIQEH LTDSNLNLTV DEGVQVAKYF

LRQMAQPFHR EDQLGLSLLS LEQLQSEETL QRIEQIAQQL

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.

Purification: Two step purification of proteins expressed in Almost Living Cell-Free Expression System

Product Details

	(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:	ERCC2
Alternative Name:	Ercc2 (ERCC2 Products)
Background:	General transcription and DNA repair factor IIH helicase subunit XPD (TFIIH subunit XPD) (EC 3.6.4.12) (CXPD) (DNA excision repair protein ERCC-2) (DNA repair protein complementing XP-D cells) (Xeroderma pigmentosum group D-complementing protein),FUNCTION: ATP-dependent 5'-3' DNA helicase, component of the general transcription and DNA repair factor IIH (TFIIH) core complex, which is involved in general and transcription-coupled nucleotide excision repair (NER) of damaged DNA and, when complexed to CAK, in RNA transcription by RNA polymerase II. In NER, TFIIH acts by opening DNA around the lesion to allow the excision of the damaged oligonucleotide and its replacement by a new DNA fragment. The ATP-dependent helicase activity of XPD/ERCC2 is required for DNA opening. In transcription, TFIIH has an essential role in transcription initiation. When the pre-initiation complex (PIC) has been established, TFIIH is required for promoter opening and promoter escape. Phosphorylation of the C-terminal tail (CTD) of the largest subunit of RNA polymerase II by the kinase module CAK controls the initiation of transcription. XPD/ERCC2 acts by forming a bridge between CAK and the core-TFIIH complex. Involved in the regulation of vitamin-D receptor activity. As part of the mitotic spindle-associated MMXD complex it plays a role in chromosome segregation. Might have a role in aging process and could play a causative role in the generation of skin cancers. {ECO:0000250|UniProtKB:P18074}.
Molecular Weight:	86.8 kDa
UniProt:	O08811
Pathways:	DNA Damage Repair

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)