Datasheet for ABIN3092497

# ERCC5 Protein (AA 1-1186) (Strep Tag)

Go to Product page

## Overview

| | |
|---|---|
| Quantity: | 250 µg |
| Target: | ERCC5 |
| Protein Characteristics: | AA 1-1186 |
| Origin: | Human |
| Source: | Cell-free protein synthesis (CFPS) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This ERCC5 protein is labelled with Strep Tag. |
| Application: | SDS-PAGE (SDS), Western Blotting (WB), ELISA |

## Product Details

| | |
|---|---|
| Brand: | AliCE® |
| Sequence: | MGVQGLWKLL ECSGRQVSPE ALEGKILAVD ISIWLNQALK GVRDRHGNSI ENPHLLTLFH RLCKLLFFRI RPIFVFDGDA PLLKKQTLVK RRQRKDLASS DSRKTTEKLL KTFLKRQAIK TAFRSKRDEA LPSLTQVRRE NDLYVLPPLQ EEEKHSSEEE DEKEWQERMN QKQALQEEFF HNPQAIDIES EDFSSLPPEV KHEILTDMKE FTKRRRTLFE AMPEESDDFS QYQLKGLLKK NYLNQHIEHV QKEMNQQHSG HIRRQYEDEG GFLKEVESRR VVSEDTSHYI LIKGIQAKTV AEVDSESLPS SSKMHGMSFD VKSSPCEKLK TEKEPDATPP SPRTLLAMQA ALLGSSSEEE LESENRRQAR GRNAPAAVDE GSISPRTLSA IKRALDDDED VKVCAGDDVQ TGGPGAEEMR INSSTENSDE GLKVRDGKGI PFTATLASSS VNSAEEHVAS TNEGREPTDS VPKEQMSLVH VGTEAFPISD ESMIKDRKDR LPLESAVVRH SDAPGLPNGR ELTPASPTCT NSVSKNETHA EVLEQQNELC PYESKFDSSL LSSDDETKCK PNSASEVIGP VSLQETSSIV SVPSEAVDNV ENVVSFNAKE HENFLETIQE QQTTESAGQD LISIPKAVEP MEIDSEESES DGSFIEVQSV |

ISDEELQAEF PETSKPPSEQ GEEELVGTRE GEAPAESESL LRDNSERDDV DGEPQEAEKD AEDSLHEWQD INLEELETLE SNLLAQQNSL KAQKQQQERI AATVTGQMFL ESQELLRLFG IPYIQAPMEA EAQCAILDLT DQTSGTITDD SDIWLFGARH VYRNFFNKNK FVEYYQYVDF HNQLGLDRNK LINLAYLLGS DYTEGIPTVG CVTAMEILNE FPGHGLEPLL KFSEWWHEAQ KNPKIRPNPH DTKVKKKLRT LQLTPGFPNP AVAEAYLKPV VDDSKGSFLW GKPDLDKIRE FCQRYFGWNR TKTDESLFPV LKQLDAQQTQ LRIDSFFRLA QQEKEDAKRI KSQRLNRAVT CMLRKEKEAA ASEIEAVSVA MEKEFELLDK AKGKTQKRGI TNTLEESSSL KRKRLSDSKG KNTCGGFLGE TCLSESSDGS SSEDAESSSL MNVQRRTAAK EPKTSASDSQ NSVKEAPVKN GGATTSSSSD SDDDGGKEKM VLVTARSVFG KKRRKLRRAR GRKRKT

**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 in one-step affinity chromatography
- 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 try to ensure that you receive soluble 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!

## Product Details

| | |
|---|---|
| | Concentration:<br>• The concentration of our recombinant proteins is measured using the absorbance at 280nm.<br>• The protein's absorbance will be measured against its specific reference buffer.<br>• We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein. |
| Purification: | One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®). |
| Purity: | > 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC). |
| Grade: | custom-made |

## Target Details

| | |
|---|---|
| Target: | ERCC5 |
| Alternative Name: | ERCC5 (ERCC5 Products) |
| Background: | DNA excision repair protein ERCC-5 (EC 3.1.-.-) (DNA repair protein complementing XP-G cells) (Xeroderma pigmentosum group G-complementing protein),FUNCTION: Single-stranded structure-specific DNA endonuclease involved in DNA excision repair (PubMed:8206890, PubMed:8090225, PubMed:8078765, PubMed:7651464, PubMed:32821917, PubMed:32522879). Makes the 3'incision in DNA nucleotide excision repair (NER) (PubMed:8090225, PubMed:8078765, PubMed:32821917, PubMed:32522879). Binds and bends DNA repair bubble substrate and breaks base stacking at the single-strand/double-strand DNA junction of the DNA bubble (PubMed:32522879). Plays a role in base excision repair (BER) by promoting the binding of DNA glycosylase NTHL1 to its substrate and increasing NTHL1 catalytic activity that removes oxidized pyrimidines from DNA (PubMed:9927729). Involved in transcription-coupled nucleotide excision repair (TCR) which allows RNA polymerase II-blocking lesions to be rapidly removed from the transcribed strand of active genes (PubMed:16246722). Functions during the initial step of TCR in cooperation with ERCC6/CSB to recognized stalled RNA polymerase II (PubMed:16246722). Also, stimulates ERCC6/CSB binding to the DNA repair bubble and ERCC6/CSB ATPase activity (PubMed:16246722). Required for DNA replication fork maintenance and preservation of genomic stability (PubMed:26833090, PubMed:32522879). Involved in homologous recombination repair (HRR) induced by DNA replication stress by recruiting RAD51, BRCA2, and PALB2 to the damaged DNA site (PubMed:26833090). During HRR, binds to the replication fork with high specificity and stabilizes it (PubMed:32522879). Also, acts upstream of HRR, to promote the release of BRCA1 from DNA (PubMed:26833090). |

## Target Details

| | |
|---|---|
| | {ECO:0000269\|PubMed:16246722, ECO:0000269\|PubMed:26833090, ECO:0000269\|PubMed:32522879, ECO:0000269\|PubMed:32821917, ECO:0000269\|PubMed:7651464, ECO:0000269\|PubMed:8078765, ECO:0000269\|PubMed:8090225, ECO:0000269\|PubMed:8206890, ECO:0000269\|PubMed:9927729}. |
| Molecular Weight: | 133.1 kDa |
| UniProt: | P28715 |
| 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.<br>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.<br>Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.** |
| Handling Advice: | Avoid repeated freeze-thaw cycles. |
| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |

## Handling

| | |
|---|---|
| Expiry Date: | 12 months |