

Datasheet for ABIN3086758

PUS7 Protein (AA 1-661) (Strep Tag)



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1 Image

Overview

Quantity:	1 mg
Target:	PUS7
Protein Characteristics:	AA 1-661
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PUS7 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence: MEMTEMTGVS LKRGALVVED NDSGVPVEET KKQKLSECSL TKGQDGLQND FLSISEDVPR
PPDTVSTGKG GKNSEAQLED EEEEEEDGLS EEECEEESES FADMMKHGLT EADVGITKFV
SSHQGFSGIL KERYSDFFVH EIGKDGRISH LNDLSIPVDE EDPSEDIFTV LTAEEKQRLE
ELQLFKNKET SVAIEVIEDT KEKRTIIHQA IKSLFPGLET KTEDREGKKY IVAYHAAGKK
ALANPRKHSW PKSRGSYCHF VLYKENKDTM DAINVLSKYL RVKPNIFSYM GTKDKRAITV
QEIAVLKITA QRLAHLNKCL MNFKLGNFSY QKNPLKLGEL QGNHFTVWLR NITGTDDQVQ
QAMNSLKEIG FINYYGMQRF GTTAVPTYQV GRAILQNSWT EVMDLILKPR SGAEKGYLVK
CREEWAKTKD PTAALRKLPV KRCVEGQLLR GLSKYGMKNI VSAFGIIPRN NRLMYIHSYQ
SYVWNNMVSK RIEDYGLKPV PGDLVLKCAT ATYIEEDDVN NYSIHDVVMP LPGFDVIYPK
HKIQEAYREM LTADNLDIDN MRHKIRDYSL SGAYRKIIIR PQNVSWEVVA YDDPKIPLFN
TDVDNLEGKT PPFASEGKY RALKMDFSLP PSTYATMAIR EVLKMDTSIK NQTQLNTTWL R

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 (ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag
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Product Details

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: PUS7

Alternative Name: PUS7 ([PUS7 Products](#))

Background: Pseudouridylate synthase 7 homolog (EC 5.4.99.-),FUNCTION: Pseudouridylate synthase that catalyzes pseudouridylation of RNAs (PubMed:28073919, PubMed:29628141, PubMed:30778726, PubMed:31477916, PubMed:35051350, PubMed:34718722). Acts as a regulator of protein synthesis in embryonic stem cells by mediating pseudouridylation of RNA fragments derived from tRNAs (tRFs): pseudouridylated tRFs inhibit translation by targeting the translation initiation complex (PubMed:29628141). Also catalyzes pseudouridylation of mRNAs: mediates pseudouridylation of mRNAs with the consensus sequence 5'-UGUAG-3' (PubMed:28073919, PubMed:31477916, PubMed:35051350). Acts as a regulator of pre-mRNA splicing by mediating pseudouridylation of pre-mRNAs at locations associated with alternatively spliced regions (PubMed:35051350). Pseudouridylation of pre-mRNAs near splice sites directly regulates mRNA splicing and mRNA 3'-end processing (PubMed:35051350). In addition to mRNAs and tRNAs, binds other types of RNAs, such as snRNAs, Y RNAs and vault RNAs, suggesting that it can catalyze pseudouridylation of many RNA types (PubMed:29628141). {ECO:0000269|PubMed:28073919, ECO:0000269|PubMed:29628141, ECO:0000269|PubMed:30778726, ECO:0000269|PubMed:31477916, ECO:0000269|PubMed:34718722, ECO:0000269|PubMed:35051350}.

Molecular Weight: 75.0 kDa

UniProt: [Q96PZ0](#)

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

Application Details

guarantee though.

Comment:

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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)



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process