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Datasheet for ABIN3095635
TUT1 Protein (AA 1-874) (Strep Tag)

Overview

Quantity:	1 mg
Target:	TUT1
Protein Characteristics:	AA 1-874
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This TUT1 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence: MAAVDSDVES LPRGGFRCCL CHVTTANRPS LDAHLGGRKH RHLVELRAAR KAQGLRSVFV
SGFPRDVDSA QLSEYFLAFG PVASVMDKD KGVFAIVEMG DVGAREAVLS QSQHSLGGHR
LRVRPREQKE FQSPASKSPK GAAPDSHQLA KALAEAADVG AQMIKLVGLR ELSEAERQLR
SLVVALMQEV FTEFFPGCVV HPFGSSINSF DVHGCDDLDF LDLGDLEEPQ PVPKAPESPS
LDSALASPLD PQALACTPAS PPDSQPPASP QDSEALDFET PSSSLAPQTP DSALASETLA
SPQSLPPASP LLEDREEDL GKASELAETP KEEKAEGAAM LELVGSILRG CVPGVYRVQT
VPSARRPVVK FCHRPSGLHG DVSLSNRLAL HNSRFLSLCS ELDGRVRPLV YTLRCWAQGR
GLSGSGPLLS NYALTLLVIY FLQTRDPPVL PTVSQLTQKA GEGEQVEVDG WDCSFPRDAS
RLEPSINVEP LSSLLAQFFS CVSCWDLRGS LLSLREGQAL PVAGGLPSNL WEGLRLGPLN
LQDPFDLSHN VAANVTSRVA GRLQNCCRAA ANYCRSLQYQ RRSSRGRDWG LLPLLQPSSP
SSLLSATPIP LPLAPFTQLT AALVQVFREA LGCHIEQATK RTRSEGGGTG ESSQGGTSKR
LKVDGQKNCC EEGKEEQGC AGDGGEDRVE EMVIEVGEMV QDWAMQSPGQ PGDLPLTTGK

HGAPGEEGQP SHAALAERGP KGHEAAQEWS QGEAGKGASL PSSASWRCAL WHRVWQGRRR
ARRRLQQQTK EGAGGGAGTR AGWLATEAQV TQELKGLSGG EERPETEPLL SFVASVSPAD
RMLTVTPLQD PQGLFPDLHH FLQVFLPQAI RHLK

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.

Product Details

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): <ol style="list-style-type: none">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:	TUT1
Alternative Name:	TUT1 (TUT1 Products)
Background:	<p>Speckle targeted PIP5K1A-regulated poly(A) polymerase (Star-PAP) (EC 2.7.7.19) (RNA-binding motif protein 21) (RNA-binding protein 21) (U6 snRNA-specific terminal uridylyltransferase 1) (U6-TUTase) (EC 2.7.7.52),FUNCTION: Poly(A) polymerase that creates the 3'-poly(A) tail of specific pre-mRNAs (PubMed:18288197, PubMed:21102410). Localizes to nuclear speckles together with PIP5K1A and mediates polyadenylation of a select set of mRNAs, such as HMOX1 (PubMed:18288197). In addition to polyadenylation, it is also required for the 3'-end cleavage of pre-mRNAs: binds to the 3'UTR of targeted pre-mRNAs and promotes the recruitment and assembly of the CPSF complex on the 3'UTR of pre-mRNAs (PubMed:21102410). In addition to adenylyltransferase activity, also has uridylyltransferase activity (PubMed:16790842, PubMed:18288197, PubMed:28589955). However, the ATP ratio is higher than UTP in cells, suggesting that it functions primarily as a poly(A) polymerase (PubMed:18288197). Acts as a specific terminal uridylyltransferase for U6 snRNA in vitro: responsible for a controlled elongation reaction that results in the restoration of the four 3'-terminal UMP-residues found in newly transcribed U6 snRNA (PubMed:16790842, PubMed:18288197, PubMed:28589955). Not involved in replication-dependent histone mRNA degradation. {ECO:0000269 PubMed:16790842, ECO:0000269 PubMed:18288197, ECO:0000269 PubMed:21102410, ECO:0000269 PubMed:28589955}.</p>
Molecular Weight:	93.8 kDa
UniProt:	Q9H6E5

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)
