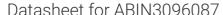
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ZCCHC11 Protein (AA 1-1644) (Strep Tag)





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Overview

Quantity:	1 mg
Target:	ZCCHC11
Protein Characteristics:	AA 1-1644
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ZCCHC11 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:

MEESKTLKSE NHEPKKNVIC EESKAVQVIG NQTLKARNDK SVKEIENSSP NRNSSKKNKQ
NDICIEKTEV KSCKVNAANL PGPKDLGLVL RDQSHCKAKK FPNSPVKAEK ATISQAKSEK
ATSLQAKAEK SPKSPNSVKA EKASSYQMKS EKVPSSPAEA EKGPSLLLKD MRQKTELQQI
GKKIPSSFTS VDKVNIEAVG GEKCALQNSP RSQKQQTCTD NTGDSDDSAS GIEDVSDDLS
KMKNDESNKE NSSEMDYLEN ATVIDESALT PEQRLGLKQA EERLERDHIF RLEKRSPEYT
NCRYLCKLCL IHIENIQGAH KHIKEKRHKK NILEKQEESE LRSLPPPSPA HLAALSVAVI
ELAKEHGITD DDLRVRQEIV EEMSKVITTF LPECSLRLYG SSLTRFALKS SDVNIDIKFP
PKMNHPDLLI KVLGILKKNV LYVDVESDFH AKVPVVVCRD RKSGLLCRVS AGNDMACLTT
DLLTALGKIE PVFIPLVLAF RYWAKLCYID SQTDGGIPSY CFALMVMFFL QQRKPPLLPC
LLGSWIEGFD PKRMDDFQLK GIVEEKFVKW ECNSSSATEK NSIAEENKAK ADQPKDDTKK
TETDNQSNAM KEKHGKSPLA LETPNRVSLG QLWLELLKFY TLDFALEEYV ICVRIQDILT
RENKNWPKRR IAIEDPFSVK RNVARSLNSQ LVYEYVVERF RAAYRYFACP QTKGGNKSTV

DFKKREKGKI SNKKPVKSNN MATNGCILLG ETTEKINAER EQPVQCDEMD CTSQRCIIDN NNLLVNELDF ADHGQDSSSL STSKSSEIEP KLDKKQDDLA PSETCLKKEL SQCNCIDLSK SPDPDKSTGT DCRSNLETES SHQSVCTDTS ATSCNCKATE DASDLNDDDN LPTQELYYVF DKFILTSGKP PTIVCSICKK DGHSKNDCPE DFRKIDLKPL PPMTNRFREI LDLVCKRCFD ELSPPCSEQH NREQILIGLE KFIQKEYDEK ARLCLFGSSK NGFGFRDSDL DICMTLEGHE NAEKLNCKEI IENLAKILKR HPGLRNILPI TTAKVPIVKF EHRRSGLEGD ISLYNTLAQH NTRMLATYAA IDPRVQYLGY TMKVFAKRCD IGDASRGSLS SYAYILMVLY FLQQRKPPVI PVLQEIFDGK QIPORMVDGW NAFFFDKTEE LKKRLPSLGK NTESLGELWL GLLRFYTEEF DFKEYVISIR QKKLLTTFEK QWTSKCIAIE DPFDLNHNLG AGVSRKMTNF IMKAFINGRK LFGTPFYPLI GREAEYFFDS RVLTDGELAP NDRCCRVCGK IGHYMKDCPK RKSLLFRLKK KDSEEEKEGN EEEKDSRDVL DPRDLHDTRD FRDPRDLRCF ICGDAGHVRR ECPEVKLARQ RNSSVAAAQL VRNLVNAQQV AGSAQQQGDQ SIRTRQSSEC SESPSYSPQP QPFPQNSSQS AAITQPSSQP GSQPKLGPPQ QGAQPPHQVQ MPLYNFPQSP PAQYSPMHNM GLLPMHPLQI PAPSWPIHGP VIHSAPGSAP SNIGLNDPSI IFAQPAARPV AIPNTSHDGH WPRTVAPNSL VNSGAVGNSE PGFRGLTPPI PWEHAPRPHF PLVPASWPYG LHQNFMHQGN ARFQPNKPFY TQDRCATRRC RERCPHPPRG NVSE

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 capture material. Eluate fractions are analyzed by SDS-PAGE.
- 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:	ZCCHC11
Alternative Name:	TUT4 (ZCCHC11 Products)
Background:	Terminal uridylyltransferase 4 (TUTase 4) (EC 2.7.7.52) (Zinc finger CCHC domain-containing
	protein 11),FUNCTION: Uridylyltransferase that mediates the terminal uridylation of mRNAs
	with short (less than 25 nucleotides) poly(A) tails, hence facilitating global mRNA decay
	(PubMed:25480299, PubMed:31036859). Essential for both oocyte maturation and fertility.
	Through 3' terminal uridylation of mRNA, sculpts, with TUT7, the maternal transcriptome by
	eliminating transcripts during occyte growth (By similarity). Involved in microRNA (miRNA)-

induced gene silencing through uridylation of deadenylated miRNA targets. Also functions as an integral regulator of microRNA biogenesis using 3 different uridylation mechanisms (PubMed:25979828). Acts as a suppressor of miRNA biogenesis by mediating the terminal uridylation of some miRNA precursors, including that of let-7 (pre-let-7), miR107, miR-143 and miR-200c. Uridylated miRNAs are not processed by Dicer and undergo degradation. Degradation of pre-let-7 contributes to the maintenance of embryonic stem (ES) cell pluripotency (By similarity). Also catalyzes the 3' uridylation of miR-26A, a miRNA that targets IL6 transcript. This abrogates the silencing of IL6 transcript, hence promoting cytokine expression (PubMed:19703396). In the absence of LIN28A, TUT7 and TUT4 monouridylate group II pre-miRNAs, which includes most of pre-let7 members, that shapes an optimal 3' end overhang for efficient processing (PubMed:25979828). Adds oligo-U tails to truncated premiRNAS with a 5' overhang which may promote rapid degradation of non-functional pre-miRNA species (PubMed:25979828). May also suppress Toll-like receptor-induced NF-kappa-B activation via binding to T2BP (PubMed:16643855). Does not play a role in replicationdependent histone mRNA degradation (PubMed:18172165). Due to functional redundancy between TUT4 and TUT7, the identification of the specific role of each of these proteins is difficult (PubMed:25979828, PubMed:25480299, PubMed:16643855, PubMed:19703396, PubMed:18172165) (By similarity). TUT4 and TUT7 restrict retrotransposition of long interspersed element-1 (LINE-1) in cooperation with MOV10 counteracting the RNA chaperonne activity of L1RE1. TUT7 uridylates LINE-1 mRNAs in the cytoplasm which inhibits initiation of reverse transcription once in the nucleus, whereas uridylation by TUT4 destabilizes mRNAs in cytoplasmic ribonucleoprotein granules (PubMed:30122351). {ECO:0000250|UniProtKB:B2RX14, ECO:0000269|PubMed:16643855, ECO:0000269|PubMed:18172165, ECO:0000269|PubMed:19703396,

ECO:0000269|PubMed:25480299, ECO:0000269|PubMed:25979828, ECO:0000269|PubMed:30122351, ECO:0000269|PubMed:31036859}.

Molecular Weight:

185.2 kDa

UniProt:

Q5TAX3

Pathways:

Stem Cell Maintenance

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.

Application Details

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)

Images

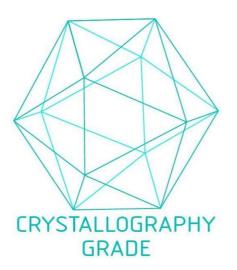


Image 1. "Crystallography Grade" protein due to multi-step, protein-specific purification process