



[Go to Product page](#)

## Datasheet for ABIN3096445 YTHDC2 Protein (AA 1-1430) (Strep Tag)

### Overview

Quantity:	1 mg
Target:	YTHDC2
Protein Characteristics:	AA 1-1430
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This YTHDC2 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

### Product Details

Sequence:	MSRPSSVSPR QPAPGGGGGG GPSPCGPGGG GRAKGLKDIR IDEEVKIAVN IALERFRYGD QREMEFPSSL TSTERAFIGR LSQSLGLVSK SKGKGANRYL TVKKKDGSET AHAMMTCNLT HNTKHAVERSL IQRFPVTNKE RTELLPKTER GNVFAVEAEN REMSKTSGRL NNGIPQIPVK RGESEFDSFR QSLPVFEKQE EIVKIIKENK VVLIVGETGS GKTTQIPQL LDDCFKNGIP CRIFCTQPRR LAAIAVAERV AAERRERIGQ TIGYQIRLES RVSPKTLTTF CTNGVLLRTL MAGDSTLSTV THVIVDEVHE RDRFSDFLLT KLRDLLQKHP TLKLILSSAA LDVNLFIQYF GSCPVIYIQG RPFVEKEMFL EDILRTTGYT NKEMLKYKKE KQEEKQQT LTEWYSAQEN SFKPESQRQR TVLNVTDEYD LLDDGGDAVF SQLTEKDVNC LEPLWLIKEMD ACLSDIWLHK DIDAFQVVFH LILTENVSD YRHSETSATA LMVAAGRGFA SQVEQLISMV ANVHASKASNG WMALDWAKHF GQTEIVDLLE SYSATLEFGN LDESSLVQTN GSDLSAEDRE LLKAYHHSFD DEKVDLDLIM HLLYNICHSC DAGAVLIFLP GYDEIVGLRD RILFDDKRFA DSTHRYQVFM LHSNMQTSQD KKV LKNPPAG VRKIILSTNI AETSITVNDV VFVIDSGKVK EKSFDALNFV
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TMLKMWISK ASAIQRKGRA GRCRPGICFR LFSRLRFQNM LEFQTELLR MPLQELCLHT  
KLLAPVNCPI ADFLMKAPEP PPALIVRNAV QMLKTIDAMD TWEDLTELG Y HLADLPVEPH  
LGKMYLCAVV LKCLDPILT ACTLAYRDPF VLPTQASQKR AAMLCRKRF AGAFSDHML  
LRAFQAWQKA RSDGWERAF EKNFLSQATM EIIIGMRTQL LGQLRASGFV RARGGGDIRD  
VNTNSENWAV VKAALVAGMY PNLVHVDREN LVLTPGKEKK VRFHPASVLS QPQYKKIPPA  
NGQAAAIKAL PTDWLIYDEM TRAHRIANIR CCSAVTPVTI LVFCGPAPLA SNALQEPSSF  
RVDGIPNDSS DSEMEDKTTA NLAALKLDEW LHFTLEPEAA SLLQLRQKW HSLFLRRMRA  
PSKPWSQVDE ATIRAIIVL STEEQSAGLQ QPSGIGQRPR PMSSEELPLA SSWRSNNSRK  
SSADTEFSDE CTTAERVLMK SPSPALHPPQ KYKDRGILHP KRGTEDRSDQ SSLKSTDSSS  
YPSPCASPSP PSSGKGSKSP SPRPNMPVRY FIMKSSNLRN LEISQKGIW STTPSNERKL  
NRAFWESSIV YLVFSVQSG HFQGFSSRMSS EIGREKSQDW GSAGLGGVFK VEWIRKESLP  
FQFAHLLNP WNDNKKVQIS RDGQELEPLV GEQLQLWER LPLGEKNTTD

**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.**

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### 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

## Product Details

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. 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:	YTHDC2
Alternative Name:	YTHDC2 ( <a href="#">YTHDC2 Products</a> )
Background:	3'-5' RNA helicase YTHDC2 (EC 3.6.4.13) (YTH domain-containing protein 2) (hYTHDC2),FUNCTION: 3'-5' RNA helicase that plays a key role in the male and female germline by promoting transition from mitotic to meiotic divisions in stem cells (PubMed:26318451, PubMed:29033321, PubMed:29970596). Specifically recognizes and binds N6-methyladenosine (m6A)-containing RNAs, a modification present at internal sites of mRNAs and some non-coding RNAs that plays a role in the efficiency of RNA processing and stability (PubMed:26318451, PubMed:29033321). Essential for ensuring a successful progression of the meiotic program in the germline by regulating the level of m6A-containing RNAs (By similarity). Acts by binding and promoting degradation of m6A-containing mRNAs: the 3'-5' RNA helicase activity is required for this process and RNA degradation may be mediated by XRN1

## Target Details

exoribonuclease (PubMed:29033321). Required for both spermatogenesis and oogenesis (By similarity). {ECO:0000250|UniProtKB:B2RR83, ECO:0000269|PubMed:26318451, ECO:0000269|PubMed:29033321, ECO:0000269|PubMed:29970596}.

Molecular Weight: 160.2 kDa

UniProt: [Q9H6S0](#)

## 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)