

Datasheet for ABIN3092916

## HEL308 Protein (AA 1-1101) (Strep Tag)



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### Overview

Quantity:	250 µg
Target:	HEL308
Protein Characteristics:	AA 1-1101
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HEL308 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

### Product Details

Brand:	AliCE®
Sequence:	<p>MDECGSRIRR RVSLPKRNP SLGCIFGAPT AAELVPGDEG KEEEEMVAEN RRRKTAGVLP</p> <p>VEVQPLLLSD SPECLVLGGG DTNPDLRHM PTDRGVGDQP NDSEVDMFGD YDSFTENSI</p> <p>AQVDDLEQKY MQLPEHKKHA TDFATENLCS ESIKNKLSIT TIGNLTELTQ DKHTENQSGY</p> <p>EGVTIEPGAD LLYDVPSSQA IYFENLQNSS NDLGDHSMKE RDWKSSSHNT VNEELPHNCI</p> <p>EQPQQNDESS SKVRTSSDMN RRKSIKDLK NAMTGNAKAQ TPIFSRSKQL KDTLLSEEIN</p> <p>VAKKTVESSS NDLGPFYSLP SKVRDLAQF KGIEKLYEWQ HTCLTLNSVQ ERKNLIYSLP</p> <p>TSGGKTLVAE ILMQLQELLCC RKDVLMLIPY VAIVQEKISG LSSFGIELGF FVEEYAGSKG</p> <p>RFPPTKRREK KSLYIATIEK GHSLVNSLIE TGRIDSLGLV VVDELHMIGE GSRGATLEMT</p> <p>LAKILYTSKT TQIIGMSATL NNVEDLQKFL QAEYYTSQFR PVELKEYLKI NDTIYEVDK</p> <p>AENGMTFSRL LNYKYSDTLK KMDPDHLVAL VTEVIPNYSC LVFCPSKKNC ENVAEMICKF</p> <p>LSKEYLKHKE KEKCEVIKNL KNIGNGNLCP VLKRTIPFGV AYHHSGLTSD ERKLLEEAYS</p>

TGVLCLFTCT STLAAGVNLP ARRVILRAPY VAKEFLKRNQ YKQMIGRAGR AGIDTIGESI  
LILQEKDKQQ VLELITKPLE NCYSHLVQEF TKGIQTLFLS LIGLKIATNL DDIYHFMNGT  
FFGVQQKVLL KEKSLWEITV ESLRYLTEKG LLQKDTIYKS EEEVQYNFHI TKLGRASFKE  
TIDLAYCDIL YRDLKKGLEG LVLESLLHLI YLTTPYDLVS QCNPDWMIYF RQFSQLSPAE  
QNVAAILGVS ESFIGKKASG QAIGKKVDKN VVNRLYLSFV LYTLKETNI WTVSEKFNMP  
RGYIQNLLTG TASFSSCVLH FCEELEEFWV YRALLVELTK KLYCYKAEI IPLMEVTGVL  
EGRAKQLYSA GYKSLMHLAN ANPEVLVRTI DHLSRRQAKQ IVSSAKMLLH EKAEALQEEV  
EELLRLPSDF PGAVASSTDK A

**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 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!

#### Concentration:

## Product Details

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.
- 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: HEL308

Alternative Name: HELQ ([HEL308 Products](#))

Background: Helicase POLQ-like (EC 3.6.4.12) (Mus308-like helicase) (POLQ-like helicase),FUNCTION: Single-stranded 3'-5' DNA helicase that plays a key role in homology-driven double-strand break (DSB) repair (PubMed:11751861, PubMed:19995904, PubMed:21398521, PubMed:24005041, PubMed:24005565, PubMed:34316696, PubMed:34937945). Involved in different DSB repair mechanisms that are guided by annealing of extensive stretches of complementary bases at break ends, such as microhomology-mediated end-joining (MMEJ), single-strand annealing (SSA) or synthesis-dependent strand annealing (SDSA) (PubMed:34937945). Possesses both DNA unwinding and annealing activities (PubMed:34937945). Forms a complex with RAD51, stimulating HELQ DNA helicase activity and ability to unwind DNA (PubMed:34937945). Efficiently unwinds substrates containing 3' overhangs or a D-loop (PubMed:21398521, PubMed:34937945). In contrast, interaction with the replication protein A (RPA/RP-A) complex inhibits DNA unwinding by HELQ but strongly stimulates DNA strand annealing (PubMed:34937945). Triggers displacement of RPA from single-stranded DNA to facilitate annealing of complementary sequences (PubMed:34316696, PubMed:34937945). {ECO:0000269|PubMed:11751861, ECO:0000269|PubMed:19995904, ECO:0000269|PubMed:21398521, ECO:0000269|PubMed:24005041, ECO:0000269|PubMed:24005565, ECO:0000269|PubMed:34316696, ECO:0000269|PubMed:34937945}.

Molecular Weight: 124.1 kDa

UniProt: [Q8TDG4](#)

## 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.  
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.

**Expiry Date:** 12 months