

Datasheet for ABIN3137297  
**POLH Protein (AA 1-694) (Strep Tag)**



[Go to Product page](#)

## Overview

Quantity:	250 µg
Target:	POLH
Protein Characteristics:	AA 1-694
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This POLH protein is labelled with Strep Tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS)

## Product Details

Brand:	AliCE®
Sequence:	MAPGQNRVVA LVDMDCEFFVQ VEQRQNPHLR NKPCAVVQYK SWKGGGIIAV SYEARAFGVT RNMWADDAKK LCPDLLLAQV RESRGKANLT KYREASVEVM EIMSYFAVIE RASIDEAYID LTSAVQERLQ KLQGQPISAD LLPSTYIEGL PRGPTVEETV QKEAIRKQGL LQWLDSLQSD DPTSPDLRLT VGAMIVEEMR AAIESKTGFQ CSAGISHNKV LAKLACGLNK PNRQTLVSHG SVPQLFSQMP IRKIRSLGGK LGASVIEVLG IEYMGDLTQF TESQLQSHFG EKNGSWLYAM CRGIEHDPVK PRQLPKTIGC SKNFPGKTAL ATREQVQWWL LQLALELEER LTKDRNDNDR VATQLVVSIR FQGDRRLSSL RRCCALPRYD AHKMSQDAFA AIRNCNTSGI QTEWSPPLTM LFLCATKFSA AAPPACTDIT AFLSSDSSCQ PKVPIASSET RTQGSGPAVP TSKEAATSLA SFFQKAAKKQ RMKETSFVPL NTATEKLSSK PSLVFQSSQT TGSQSFFKQK SLLLQHTQLS NSAAPDPPQA SPAAQPSCLP AECVDSGPDD GAVKPVSSKA VSTEMNVAGD SPNVLDSPAY NSQEVTRAT EDQVLCEKCD SLVPVWDMPE HTDYHFALEL QKSFLQPCTS KPQAIPAVSP

QGKRNPKSPS ASSKRLRPH GMQTLESFFK PLTH

**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 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:

- 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®).

---

## Product Details

---

Purity: > 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

---

Grade: custom-made

---

## Target Details

---

Target: POLH

---

Alternative Name: Polh ([POLH Products](#))

---

Background: DNA polymerase eta (EC 2.7.7.7) (RAD30 homolog A) (Xeroderma pigmentosum variant type protein homolog),FUNCTION: DNA polymerase specifically involved in the DNA repair by translesion synthesis (TLS) (PubMed:10871396). Due to low processivity on both damaged and normal DNA, cooperates with the heterotetrameric (REV3L, REV7, POLD2 and POLD3) POLZ complex for complete bypass of DNA lesions. Inserts one or 2 nucleotide(s) opposite the lesion, the primer is further extended by the tetrameric POLZ complex. In the case of 1,2-intrastrand d(GpG)-cisplatin cross-link, inserts dCTP opposite the 3' guanine (By similarity). Particularly important for the repair of UV-induced pyrimidine dimers (PubMed:10871396). Although inserts the correct base, may cause base transitions and transversions depending upon the context. May play a role in hypermutation at immunoglobulin genes. Forms a Schiff base with 5'-deoxyribose phosphate at abasic sites, but does not have any lyase activity, preventing the release of the 5'-deoxyribose phosphate (5'-dRP) residue. This covalent trapping of the enzyme by the 5'-dRP residue inhibits its DNA synthetic activity during base excision repair, thereby avoiding high incidence of mutagenesis. Targets POLI to replication foci (By similarity). {ECO:0000250|UniProtKB:Q9Y253, ECO:0000269|PubMed:10871396}.

---

Molecular Weight: 76.2 kDa

---

UniProt: [Q9JJN0](#)

---

Pathways: [DNA Damage Repair](#)

---

## 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

---

## Application Details

---

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