

Datasheet for ABIN3094746

**POLK Protein (AA 1-870) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	POLK
Protein Characteristics:	AA 1-870
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This POLK protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Sequence:	MDSTKEKCDS YKDDLLLRMG LNDNKAGMEG LDKEKINKII MEATKGSRFY GNELKKEKQV NQRIENMMQQ KAQITSQQLR KAQLQVDRFA MELEQSRNLS NTIVHIDMDA FYAAVEMRDN PELKDKPIAV GSMSMLSTSN YHARRFGVRA AMPGFIKRL CPQLIIVPPN FDYRAVSKE VKEILADYDP NFMAMSLDEA YLNITKHL EE RQNWPE DKRR YFIKMGSSVE NDNPGKEV NK LSEHERSISP LLFEESPSDV QPPGDPFQVN FEEQNNPQIL QNSVVFGTSA QEVVKEIRFR IEQKTTLTAS AGIAPNTMLA KVCSDKNKPN GQYQILPNRQ AVMDFIKDL P IRKVSIGIKV TEKMLKALGI ITCTELYQQR ALLSLLFSET SWHYFLHISL GLGSTHLTRD GERKSMSVER TFSEINKAEE QYSLCQELCS ELAQDLQKER LKGRTVTIKL KNVNFEVKTR ASTVSSVST AEEIFAIKE LLKTEIDADF PHPLRLRLMG VRISSFPNEE DRKHQQRSII GFLQAGNQAL SATECTLEKT DKDKFVKPLE MSHKKSFFDK KRSEKWSHQ DTFKCEAVNK QSFQTSQPFQ VLKKKMENL EISENSDDCQ ILTCPVCFRA QGCISLEALN KHVDECLDGP SISENFKMFS CSHVSATKVN KKENVPASSL CEKQDYEAHP KIKEISSVDC IALVDTIDNS SKAESIDALS
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NKHSKEECSS LPSKSFNIEH CHQNSSSTVS LENEDVGSFR QEYRQPYLCE VKTGQALVCP  
VCNVEQKTS D LTLFNVHVDV CLNKSFQEL RKDKFNPVNQ PKESSRSTGS SSGVQKAVTR  
TKRPGLMTKY STSKKIKPNN PKHTLDIFFK

**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 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"><li>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.</li><li>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.</li></ol>
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:	POLK
Alternative Name:	POLK ( <a href="#">POLK Products</a> )
Background:	<p>DNA polymerase kappa (EC 2.7.7.7) (DINB protein) (DINP),FUNCTION: DNA polymerase specifically involved in DNA repair. Plays an important role in translesion synthesis, where the normal high-fidelity DNA polymerases cannot proceed and DNA synthesis stalls. Depending on the context, it inserts the correct base, but causes frequent base transitions, transversions and frameshifts. Lacks 3'-5' proofreading exonuclease activity. Forms a Schiff base with 5'-deoxyribose phosphate at abasic sites, but does not have lyase activity.</p> <p>{ECO:0000269 PubMed:10620008, ECO:0000269 PubMed:11024016, ECO:0000269 PubMed:12145297, ECO:0000269 PubMed:12444249, ECO:0000269 PubMed:12952891, ECO:0000269 PubMed:14630940, ECO:0000269 PubMed:15533436, ECO:0000269 PubMed:28297716}.</p>
Molecular Weight:	98.8 kDa
UniProt:	<a href="#">Q9UBT6</a>
Pathways:	<a href="#">DNA Damage Repair</a>

## 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.
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## Application Details

Comment:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
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