

Datasheet for ABIN3094681

## POT1 Protein (AA 1-634) (Strep Tag)



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### Overview

Quantity:	250 µg
Target:	POT1
Protein Characteristics:	AA 1-634
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This POT1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

### Product Details

Brand:	AliCE®
Sequence:	<p>MSLVPATNYI YTPLNQLKGG TIVNVYGVVK FFKPPYLSKG TDYCSVVTIV DQTNVKLTCL</p> <p>LFSGNYEALP IYKNGDIVR FHRLKIQVYK KETQGITSSG FASLTFEGTL GAPIIPTSS</p> <p>KYFNFTTEDH KMVEALRVWA STHMSPSWTL LKLCDVQPMQ YFDLTCQLLG KAEVDGASFL</p> <p>LKVWDGTRTP FPSWRVLIQD LVLEGDLSHI HRLQNLTIDI LVYDNHVVHA RSLKVGSLR</p> <p>IYSLHTKLQS MNSENQTMLS LEFHLHGGTS YGRGIRVLPE SNSDVDQLKK DLESANLTAN</p> <p>QHSDVICQSE PDDSFSSGS VSLYEVCRCQ QLSATILTDH QYLERTPLCA ILKQKAPQQY</p> <p>RIRAKLSYK PRRLFQSVKL HCPKCHLLQE VPHEGDLDI FQDGATKTPD VKLQNTSLYD</p> <p>SKIWTTKNQK GRKVAVHFVK NNGILPLSNE CLLIEGGTL SEICKLSNKF NSVIPVRSGH</p> <p>EDLELLDSA PFLIQGTIHH YGCKQCSSLR SIQNLNSLVD KTSWIPSSVA EALGIVPLQY</p> <p>VFVMTFTLDD GTGVLEAYLM DSDKFFQIPA SEVLMDDDLQ KSDVMIMDMF CPPGIKIDAY</p> <p>PWLECFIKSY NVTNGTDNQI CYQIFDTTVA EDVI</p>

**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:

- 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.

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### Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).

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### Purity:

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

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## Product Details

Grade: custom-made

## Target Details

Target: POT1

Alternative Name: POT1 ([POT1 Products](#))

Background: Protection of telomeres protein 1 (hPot1) (POT1-like telomere end-binding protein),FUNCTION: Component of the telomerase ribonucleoprotein (RNP) complex that is essential for the replication of chromosome termini. Is a component of the double-stranded telomeric DNA-binding TRF1 complex which is involved in the regulation of telomere length by cis-inhibition of telomerase. Also acts as a single-stranded telomeric DNA-binding protein and thus may act as a downstream effector of the TRF1 complex and may transduce information about telomere maintenance and/or length to the telomere terminus. Component of the shelterin complex (telosome) that is involved in the regulation of telomere length and protection. Shelterin associates with arrays of double-stranded TTAGGG repeats added by telomerase and protects chromosome ends, without its protective activity, telomeres are no longer hidden from the DNA damage surveillance and chromosome ends are inappropriately processed by DNA repair pathways. Binds to two or more telomeric single-stranded 5'-TTAGGG-3' repeats (G-strand) and with high specificity to a minimal telomeric single-stranded 5'-TAGGGTTAG-3' sequence. Binds telomeric single-stranded sequences internally or at proximity of a 3'-end. Its activity is TERT dependent but it does not increase TERT activity by itself. In contrast, the ACD-POT1 heterodimer enhances telomere elongation by increasing telomerase processivity. {ECO:0000269|PubMed:12768206, ECO:0000269|PubMed:12781132, ECO:0000269|PubMed:16166375, ECO:0000269|PubMed:17237768, ECO:0000269|PubMed:20231318, ECO:0000269|PubMed:27013236, ECO:0000269|PubMed:35420632}.

Molecular Weight: 71.4 kDa

UniProt: [Q9NUX5](#)

Pathways: [Cell Division Cycle](#), [Telomere 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

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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>
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Restrictions:	For Research Use only
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## Handling

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Format:	Liquid
Buffer:	<p>The buffer composition is at the discretion of the manufacturer.</p> <p>Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol <b>Might differ depending on protein.</b></p>
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months