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POT1 Protein (AA 1-640) (Strep Tag)



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Overview

Quantity:	1 mg
Target:	POT1
Protein Characteristics:	AA 1-640
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This POT1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:

MSLVSTAPYT YTPLNLLKEG TIANVYGVVK FFKPPYVSKG TDYCSVVTIV DQTNVKLTCM
LFSGNYEALP IIYKVGDIVR FHRLKIQVYK NELQGINCSG FASLTFEGTV GMPVTARTSS
KVFSFTPQDQ KMVEALRVWA SKHISASSTL VQLCDAQPMQ YYDLTCQLLG KAQVDSTAFL
LKVWDGTQTV LPSWRVSTQD LTFEGDLSHI ERLQSLVVDI LVYDNHVQVA RSIEVGCFLR
LYSLHTKLQP GNSETSSSES LRLEFHLHGG TSYGRGIRVL PDTSPCVDQL KKALEGANLP
VTETSTGICQ SENGDSSALS NSGSGAVSPY EEERCQQVSA TILTNHQHLE KTPLCAILTQ
KAPQQYRVRA KLRSYLPRRL SQSVKLLCPK CHSVQEVPHG DSLDKILQDA ATEAPDIKLK
ATSLYYSKVW TTEDQGGRQV AVHFVKNNGI LPASSECLIL IEGGRLCEVS KLSSKFHSVM
PVRSGPESLE LLTLSAPFLI QGKVHHYGCK QCSSLKPIQN LNSRFHKGPW TPSSVAEALG
VVPLQYVFVM VFTLDDGTGV LEAYLKDSEH FFKIPASEVL TDDDLQRSLE TIMDMICPPG
IKVDAYPWLE CLLKSYNVTI GTERRICYQI FDTTVAENVV

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 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 posttranslational 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.

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.

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)

Target Details

Target: POT1

Alternative Name: Pot1 (POT1 Products)

Background:

Protection of telomeres protein 1 (mPot1) (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 similarity). {ECO:0000250}.

Molecular Weight:

70.9 kDa

UniProt:

Q91WC1

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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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)