

Datasheet for ABIN3095949

**Topoisomerase II alpha Protein (AA 1-1531) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	Topoisomerase II alpha (TOP2A)
Protein Characteristics:	AA 1-1531
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Topoisomerase II alpha protein is labelled with Strep Tag.
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS)

## Product Details

Sequence:	MEVSPLQPVN ENMQVNKIKK NEDAKKRLSV ERIYQKKTQL EHILLRPDTY IGSVELVTQQ MWVYDEDVGI NYREVTFVPG LYKIFDEILV NAADNKQRDP KMSCIRVTID PENNLISIWN NGKGIPVEH KVEKMYVPAL IFGQLLTSSN YDDDEKKVTG GRNGYGAKLC NIFSTKFTVE TASREYKKMF KQTWMDNMGR AGEMELKPFN GEDYTCITFQ PDLSKFKMQS LDKDIVALMV RRAYDIAGST KDVKVFLNGN KLPVKGFRSY VDMYLDKLD ETGNSLKVH EQVNHRWEVC LTMSEKGFQQ ISFVNSIATS KGGRHVDYVA DQIVTKLVDV VKKKNKGGVA VKAHQVKNHM WIFVNALIEN PTFDSQTKEN MTLQPKSFGS TCQLSEKFIK AAIGCGIVES ILNWVKFKAQ VQLNKKCSAV KHNRIKGIPK LDDANDAGGR NSTECTLILT EGDSAKTLAV SGLGVVGRDK YGVFPLRGKI LNVREASHKQ IMENAEINNI IKIVGLQYKK NYEDEDSLKT LRYGKIMIMT DQDQDGSNIK GLLINFIHHN WPSLLRHRFL EEFITPIVKV SKNKQEMAFY SLPEFEEWKS STPNHKKWKV KYYKGLGTST SKEAKEYFAD MKRHRIQFKY SGPEDDAAIS LAFSKKQIDD RKEWLTNFME DRRQRKLLGL PEDYLYGQTT TYLTYNDFIN KELILFSNSD NERSIPSMVD
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GLKPGQRKVL FTCFKRNDKR EVKVAQLAGS VAEMSSYHHG EMSLMMTIIN LAQNFVGSNN  
LNLLQPIGQF GTRLHGKDS ASPRYIFTML SSLARLLFPP KDDHTLKFLY DDNQRVEPEW  
YIPIPMVLI NGAEGIGTGW SCKIPNFDVR EIVNNIRRLM DGEEPLPMLP SYKNFKGTIE  
ELAPNQYVIS GEVAILNSTT IEISELPVRT WTQTYKEQVL EPMLNGTEKT PPLITDYREY  
HTDTTVKFVV KMTEEKLAEA ERVGLHKVFK LQTSLTCNSM VLFDHVGCLK KYDTVLDILR  
DFFELRLKYY GLRKEWLLGM LGAESAKLNN QARFILEKID GKIIINPKP KELIKVLIQR  
GYSDPVKAW KEAQQKVPDE EENEESDNEK ETEKSDSVTD SGPTFNYLLD MPLWYLTKEK  
KDELCLRNE KEQELDTLKR KSPSDLWKED LATFIEELEA VEAKEKQDEQ VGLPGKGGKA  
KGKKTQMAEV LPSPRGQRFV PRITIEMKAE AEKKNKKKIK NENTEGSPQE DGVELEGLKQ  
RLEKKQKREP GTKTKKQTTL AFKPIKKGKK RNPWSDSESD RSSDESNDV PPRETEPRRA  
ATKTKFTMDL DSDDEFSDFD EKTDDDEFVP SDASPPKTKT SPKLSNKLK PQKSVVSDLE  
ADDVKGSVPL SSSPPATHFP DETEITNPVP KKNVTVKKTA AKSQSSTSTT GAKKRAAPKG  
TKRDPALNSG VSQKPDPAKT KNRRKRKPST SDDSDSNFEK IVSKAVTSKK SKGESDDFHM  
DFDSAVAPRA KSVRAKKPIK YLEESDEDDL F

**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 post-translational modifications.

## Product Details

- 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. 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.
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:	Topoisomerase II alpha (TOP2A)
Alternative Name:	TOP2A ( <a href="#">TOP2A Products</a> )
Background:	DNA topoisomerase 2-alpha (EC 5.6.2.2) (DNA topoisomerase II, alpha isozyme),FUNCTION: Key decatenating enzyme that alters DNA topology by binding to two double-stranded DNA molecules, generating a double-stranded break in one of the strands, passing the intact strand through the broken strand, and religating the broken strand (PubMed:17567603, PubMed:18790802, PubMed:22013166, PubMed:22323612). May play a role in regulating the period length of BMAL1 transcriptional oscillation (By similarity). {ECO:0000250 UniProtKB:Q01320, ECO:0000269 PubMed:17567603,

## Target Details

	ECO:0000269 PubMed:18790802, ECO:0000269 PubMed:22013166, ECO:0000269 PubMed:22323612}.
Molecular Weight:	174.4 kDa
UniProt:	<a href="#">P11388</a>
Pathways:	<a href="#">Cell Division Cycle, Mitotic G1-G1/S Phases</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.
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)



**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process