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Datasheet for ABIN3095951

TOP3A Protein (AA 1-1001) (Strep Tag)

Overview

Quantity:	1 mg
Target:	TOP3A
Protein Characteristics:	AA 1-1001
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This TOP3A protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence:	MIFPVARYAL RWLRRPEDRA FSRAAMEMAL RGV RKVLCVA EKNDAAKGIA DLLSNGRMRR REGLSKFNKI YEFDYHLYGQ NVTMVMTSVS GHLLAHDFQM QFRKWQSCNP LVLFEAEIEK YCPENFVDIK KTLERETRQC QALVIWTD CD REGENIGFEI IHVCKAVKPN LQVLRARFSE ITPHAVRTAC ENLTEPDQRV SDAVDVRQEL DLRIGAAFR FQTLRLQRIF PEVLAEQLIS YGSCQFPTLG FVVERFKAIQ AFVPEIFHRI KVTHDHK DGI VEFNWKRHRL FNHTACLVLY QLCVEDPMAT VVEVR SKPKS KWRPQALDTV ELEKLASRKL RINAKETMRI AEKLYTQGYI SYPR TETNIF PRDLNLT VLV EQQTPDPRWG AFAQSILERG GPTPRNGNKS DQAHPIIHT KYTN NLQGDE QRLYEFIVRH FLACCSQDAQ GQETTVEIDI AQERFVAHGL MILARNYLDV YPYDHWSDKI LPVYEQGSHF QPSTVEMVDG ETSPPKLLTE ADLIALMEKH GIGTDATHAE HIETIKARMY VGLTPDKRFL PGHLGMGLVE GYDSMGYEMS KPD LRAELEA DLK LICDGKK DKFV VLRQQV QKYKQVFIEA VAKAKKLDEA LAQYFGNGTE LAQQEDIYPA MPEPIRKCPQ CNKDMVLKTK KNGGFYLSCM GFPECRSAVW LPDSVLEASR DSSVCPVCQP HPVYRLKLKF
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KRGS LPPTMP LEFVCCIGGC DDTLREILD LRFSGGPPRAS QPSGRLQANQ SLNRMDNSQH
PQPADSRQTG SSKALAQTL PPTAAGESNS VTCNCGQEA VLLTVRKEGPN RGRQFFKCNG
GSCNFFLWAD SPNPGAGGPP ALAYRPLGAS LGCPPGPGIH LGGFGNPGDG SSGTSC LCS
QPSVTRTVQK DGP NKGRQFH TCAKPREQQC GFFQWVDENT APGTSGAPSW TGDRGRTLES
EARSKRPRAS SSDMGSTAKK PRKCSLCHQP GHTRPFCPQN R

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.
- 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

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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)

Target Details

Target:	TOP3A
Alternative Name:	TOP3A (TOP3A Products)
Background:	DNA topoisomerase 3-alpha (EC 5.6.2.1) (DNA topoisomerase III alpha),FUNCTION: Releases the supercoiling and torsional tension of DNA introduced during the DNA replication and transcription by transiently cleaving and rejoining one strand of the DNA duplex. Introduces a single-strand break via transesterification at a target site in duplex DNA. The scissile phosphodiester is attacked by the catalytic tyrosine of the enzyme, resulting in the formation of a DNA-(5'-phosphotyrosyl)-enzyme intermediate and the expulsion of a 3'-OH DNA strand. The free DNA strand then undergoes passage around the unbroken strand thus removing DNA supercoils. Finally, in the religation step, the DNA 3'-OH attacks the covalent intermediate to expel the active-site tyrosine and restore the DNA phosphodiester backbone. As an essential component of the RMI complex it is involved in chromosome separation and the processing of homologous recombination intermediates to limit DNA crossover formation in cells. Has DNA decatenation activity (PubMed:30057030). It is required for mtDNA decatenation and segregation after completion of replication, in a process that does not require BLM, RMI1 and RMI2 (PubMed:29290614). {ECO:0000269 PubMed:20445207, ECO:0000269 PubMed:29290614, ECO:0000269 PubMed:30057030, ECO:0000269 PubMed:8622991}.
Molecular Weight:	112.4 kDa

Target Details

UniProt:	Q13472
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:	<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)