Datasheet for ABIN3135636

APEX2 Protein (AA 1-516) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	APEX2
Protein Characteristics:	AA 1-516
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This APEX2 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Brand:	AliCE®
Sequence:	MLRVVSWNIN GIRSPLQGLA CQEPSSCPTA LRRVLDELDA DIVCLQETKV TRDVLTEPLA IVEGYNSYFS FSRSRSGYSG VATFCKDSAT PVAAEEGLSG VFATLNGDIG CYGNMDEFTQ EELRVLDSEG RALLTQHKIR TLEGKEKTLT LINVYCPHAD PGKPERLTFK MRFYRLLQMR AEALLAAGSH VIILGDLNTA HRPIDHCDAS SLECFEEDPG RKWMDGLLSN PGDEAGPHIG LFMDSYRYLH PKQQRAFTCW SVVSGARHLN YGSRLDYVLG DRALVIDTFQ ASFLLPEVMG SDHCPVGAVL NVSCVPAKQC PALCTRFLPE FAGTQLKILR FLVPLEQEPV REQQVLQPSH QIQAQRQPRK ACMHSTRLRK SQGGPKRKQK NLMSYFQPSS SLSQTSGVEL PTLPLVGPLT TPKTAEEVAT ATVLEEKNKV PESKDEKGER TAFWKSMLSG PSPMPLCGGH REPCVMRTVK KTGPNFGRQF YMCARPRGPP SDPSSRCNFF LWSRPS **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 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.
Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).
Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	APEX2
Alternative Name:	Apex2 (APEX2 Products)
Background:	DNA-(apurinic or apyrimidinic site) endonuclease 2 (EC 3.1.11.2) (APEX nuclease 2) (Apurinic-apyrimidinic endonuclease 2) (AP endonuclease 2),FUNCTION: Functions as a weak apurinic/apyrimidinic (AP) endodeoxyribonuclease in the DNA base excision repair (BER) pathway of DNA lesions induced by oxidative and alkylating agents (By similarity). Initiates repair of AP sites in DNA by catalyzing hydrolytic incision of the phosphodiester backbone immediately adjacent to the damage, generating a single-strand break with 5'-deoxyribose phosphate and 3'-hydroxyl ends (By similarity). Also displays double-stranded DNA 3'-5' exonuclease, 3'-phosphodiesterase activities. Shows robust 3'-5' exonuclease activity on 3'-recessed heteroduplex DNA and is able to remove mismatched nucleotides preferentially (By similarity). Shows fairly strong 3'-phosphodiesterase activity involved in the removal of 3'-damaged termini formed in DNA by oxidative agents. In the nucleus functions in the PCNA-dependent BER pathway (By similarity). Plays a role in reversing blocked 3' DNA ends, problematic lesions that preclude DNA synthesis (By similarity). Required for somatic hypermutation (SHM) and DNA cleavage step of class switch recombination (CSR) of immunoglobulin genes (PubMed:18025127, PubMed:19556307). Required for proper cell cycle progression during proliferation of peripheral lymphocytes (PubMed:15319281). {ECO:0000250|UniProtKB:Q9UBZ4, ECO:0000269|PubMed:12573260, ECO:0000269|PubMed:15319281, ECO:0000269|PubMed:18025127, ECO:0000269|PubMed:19556307}.
Molecular Weight:	57.3 kDa
UniProt:	Q68G58

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:	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

Application Details

	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!
Restrictions:	For Research Use only

Handling

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