Datasheet for ABIN7552313

APEX2 Protein (AA 1-518) (His tag)

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Overview

Quantity:	1 mg
Target:	APEX2
Protein Characteristics:	AA 1-518
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This APEX2 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant APEX2 Protein expressed in mammalian cells.
Sequence:	MLRVVSWNIN GIRRPLQGVA NQEPSNCAAV AVGRILDELD ADIVCLQETK VTRDALTEPL AIVEGYNSYF SFSRNRSGYS GVATFCKDNA TPVAAEEGLS GLFATQNGDV GCYGNMDEFT QEELRALDSE GRALLTQHKI RTWEGKEKTL TLINVYCPHA DPGRPERLVF KMRFYRLLQI RAEALLAAGS HVIILGDLNT AHRPIDHWDA VNLECFEEDP GRKWMDSLLS NLGCQSASHV GPFIDSYRCF QPKQEGAFTC WSAVTGARHL NYGSRLDYVL GDRTLVIDTF QASFLLPEVM GSDHCPVGAV LSVSSVPAKQ CPPLCTRFLP EFAGTQLKIL RFLVPLEQSP VLEQSTLQHN NQTRVQTCQN KAQVRSTRPQ PSQVGSSRGQ KNLKSYFQPS PSCPQASPDI ELPSLPLMSA LMTPKTPEEK AVAKVVKGQA KTSEAKDEKE LRTSFWKSVL AGPLRTPLCG GHREPCVMRT VKKPGPNLGR RFYMCARPRG PPTDPSSRCN FFLWSRPS **Sequence without tag. The proposed Purification-Tag is based on experiences 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.**

Product Details

Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, 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) (AP endonuclease XTH2) (APEX nuclease 2) (APEX nuclease-like 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 (PubMed:16687656). 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. Also displays double-stranded DNA 3'-5' exonuclease, 3'-phosphodiesterase activities (PubMed:16687656, PubMed:19443450, PubMed:32516598). Shows robust 3'-5' exonuclease activity on 3'-recessed heteroduplex DNA and is able to remove mismatched nucleotides preferentially (PubMed:16687656, PubMed:19443450). Also exhibits 3'-5' exonuclease activity

Target Details

	on a single nucleotide gap containing heteroduplex DNA and on blunt-ended substrates (PubMed:16687656). Shows fairly strong 3'-phosphodiesterase activity involved in the removal of 3'-damaged termini formed in DNA by oxidative agents (PubMed:16687656, PubMed:19443450). In the nucleus functions in the PCNA-dependent BER pathway (PubMed:11376153). Plays a role in reversing blocked 3' DNA ends, problematic lesions that preclude DNA synthesis (PubMed:32516598). Required for somatic hypermutation (SHM) and DNA cleavage step of class switch recombination (CSR) of immunoglobulin genes (By similarity). Required for proper cell cycle progression during proliferation of peripheral lymphocytes (By similarity). {ECO:0000250|UniProtKB:Q68G58, ECO:0000269|PubMed:11376153, ECO:0000269|PubMed:16687656, ECO:0000269|PubMed:19443450, ECO:0000269|PubMed:32516598}.
Molecular Weight:	57.4 kDa
UniProt:	Q9UBZ4

Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months