Datasheet for ABIN7564171

DNA2 Protein (AA 1-1062) (His tag)

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Overview

Quantity:	1 mg
Target:	DNA2
Protein Characteristics:	AA 1-1062
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This DNA2 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant Dna2 Protein expressed in mammalian cells.
Sequence:	MEPLDELDLL LLEEDGGAEA VPRVELLRKK ADALFPETVL SRGVDNRYLV LAVETSQNER GAEEKRLHVT ASQDREHEVL CILRNGWSSV PVEPGDIVHL EGDCTSEPWI IDDDFGYFIL YPDMMISGTS VASSIRCLRR AVLSETFRGS DPATRQMLIG TILHEVFQKA ISESFAPERL QELALQTLRE VRHLKEMYRL NLSQDEILCE VEEYLPSFSK WAEDFMRKGP SSEFPQMQLS LPSDGSNRSS PCNIEVVKSL DIEESIWSPR FGLKGKIDVT VGVKIHRDCK MKYKVMPLEL KTGKESNSIE HRSQVVLYTL LSQERREDPE AGWLLYLKTG QMYPVPANHL DKRELLKLRN WLAASLLHRV SRAAPGEEAR LSALPQIIEE EKTCKYCSQI GNCALYSRAV EEQGDDASIP EAMLSKIQEE TRHLQLAHLK YFSLWCLMLT LESQSKDNRK THQSIWLTPA SELEESGNCV GNLVRTEPVS RVCDGQYLHN FQRKNGPMPA TNLMAGDRII LSGEERKLFA LSKGYVKKMN KAAVTCLLDR NLSTLPATTV FRLDREERHG DISTPLGNLS KLMESTDPSK RLRELIIDFR EPQFIAYLSS VLPHDAKDTV ANILKGLNKP QRQAMKRVLL SKDYTLIVGM PGTGKTTTIC ALVRILSACG FSVLLTSYTH SAVDNILLKL AKFKVGFLRL GQSHKVHPDI QKFTEEEICR

Product Details

	SRSIASLAHL EELYNSHPIV ATTCMGINHP IFSRKTFDFC IVDEASQISQ PVCLGPLFFS RRFVLVGDHQ QLPPLVVNRE ARALGMSESL FKRLERNESA VVQLTVQYRM NRKIMSLSNK LTYAGKLECG SDRVANAVLA LPNLKDARLS LQLYADYSDS PWLAGVLEPD NPVCFLNTDK VPAPEQVENG GVSNVTEARL IVFLTSTFIK AGCSPSDIGV IAPYRQQLRI ISDLLARSSV GMVEVNTVDK YQGRDKSLIL VSFVRSNEDG TLGELLKDWR RLNVALTRAK HKLILLGSVS SLKRFPPLGT LFDHLNAEQL ILDLPSREHE SLSHILGDCQ RD **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.**
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:	DNA2
Alternative Name:	Dna2 (DNA2 Products)
Background:	DNA replication ATP-dependent helicase/nuclease DNA2 (DNA replication ATP-dependent helicase-like homolog) [Includes: DNA replication nuclease DNA2 (EC 3.1.-.-), DNA replication

Target Details

	ATP-dependent helicase DNA2 (EC 3.6.4.12)],FUNCTION: Key enzyme involved in DNA replication and DNA repair in nucleus and mitochondrion. Involved in Okazaki fragments processing by cleaving long flaps that escape FEN1: flaps that are longer than 27 nucleotides are coated by replication protein A complex (RPA), leading to recruit DNA2 which cleaves the flap until it is too short to bind RPA and becomes a substrate for FEN1. Also involved in 5'-end resection of DNA during double-strand break (DSB) repair: recruited by BLM and mediates the cleavage of 5'-ssDNA, while the 3'-ssDNA cleavage is prevented by the presence of RPA. Also involved in DNA replication checkpoint independently of Okazaki fragments processing. Possesses different enzymatic activities, such as single-stranded DNA (ssDNA)-dependent ATPase, 5'-3' helicase and endonuclease activities. While the ATPase and endonuclease activities are well-defined and play a key role in Okazaki fragments processing and DSB repair, the 5'-3' DNA helicase activity is subject to debate. According to various reports, the helicase activity is weak and its function remains largely unclear. Helicase activity may promote the motion of DNA2 on the flap, helping the nuclease function (By similarity). {ECO:0000250}.
Molecular Weight:	119.4 kDa
UniProt:	Q6ZQJ5
Pathways:	Telomere Maintenance, DNA Damage Repair, DNA Replication, Synthesis of DNA

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