Datasheet for ABIN7553696

POLD1 Protein (AA 1-1107) (His tag)

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Overview

Quantity:	1 mg
Target:	POLD1
Protein Characteristics:	AA 1-1107
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This POLD1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat POLD1 Protein expressed in mammalien cells.
Sequence:	MDGKRRPGPG PGVPPKRARG GLWDDDDAPR PSQFEEDLAL MEEMEAEHRL QEQEEEELQS VLEGVADGQV PPSAIDPRWL RPTPPALDPQ TEPLIFQQLE IDHYVGPAQP VPGGPPPSRG SVPVLRAFGV TDEGFSVCCH IHGFAPYFYT PAPPGFGPEH MGDLQRELNL AISRDSRGGR ELTGPAVLAV ELCSRESMFG YHGHGPSPFL RITVALPRLV APARRLLEQG IRVAGLGTPS FAPYEANVDF EIRFMVDTDI VGCNWLELPA GKYALRLKEK ATQCQLEADV LWSDVVSHPP EGPWQRIAPL RVLSFDIECA GRKGIFPEPE RDPVIQICSL GLRWGEPEPF LRLALTLRPC APILGAKVQS YEKEEDLLQA WSTFIRIMDP DVITGYNIQN FDLPYLISRA QTLKVQTFPF LGRVAGLCSN IRDSSFQSKQ TGRRDTKVVS MVGRVQMDML QVLLREYKLR SYTLNAVSFH FLGEQKEDVQ HSIITDLQNG NDQTRRRLAV YCLKDAYLPL RLLERLMVLV NAVEMARVTG VPLSYLLSRG QQVKVVSQLL RQAMHEGLLM PVVKSEGGED YTGATVIEPL KGYYDVPIAT LDFSSLYPSI MMAHNLCYTT LLRPGTAQKL GLTEDQFIRT PTGDEFVKTS VRKGLLPQIL

Product Details

	ENLLSARKRA KAELAKETDP LRRQVLDGRQ LALKVSANSV YGFTGAQVGK LPCLEISQSV TGFGRQMIEK TKQLVESKYT VENGYSTSAK VVYGDTDSVM CRFGVSSVAE AMALGREAAD WVSGHFPSPI RLEFEKVYFP YLLISKKRYA GLLFSSRPDA HDRMDCKGLE AVRRDNCPLV ANLVTASLRR LLIDRDPEGA VAHAQDVISD LLCNRIDISQ LVITKELTRA ASDYAGKQAH VELAERMRKR DPGSAPSLGD RVPYVIISAA KGVAAYMKSE DPLFVLEHSL PIDTQYYLEQ QLAKPLLRIF EPILGEGRAE AVLLRGDHTR CKTVLTGKVG GLLAFAKRRN CCIGCRTVLS HQGAVCEFCQ PRESELYQKE VSHLNALEER FSRLWTQCQR CQGSLHEDVI CTSRDCPIFY MRKKVRKDLE DQEQLLRRFG PPGPEAW **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.**
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalien 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, Western Blot
Grade:	custom-made

Target Details

Target:	POLD1
Alternative Name:	POLD1 (POLD1 Products)
Background:	DNA polymerase delta catalytic subunit (EC 2.7.7.7) (3'-5' exodeoxyribonuclease) (EC 3.1.11.-) (DNA polymerase subunit delta p125),FUNCTION: As the catalytic component of the trimeric

Target Details

	(Pol-delta3 complex) and tetrameric DNA polymerase delta complexes (Pol-delta4 complex), plays a crucial role in high fidelity genome replication, including in lagging strand synthesis, and repair. Exhibits both DNA polymerase and 3'- to 5'-exonuclease activities (PubMed:16510448, PubMed:19074196, PubMed:20334433, PubMed:24035200, PubMed:24022480). Requires the presence of accessory proteins POLD2, POLD3 and POLD4 for full activity. Depending upon the absence (Pol-delta3) or the presence of POLD4 (Pol-delta4), displays differences in catalytic activity. Most notably, expresses higher proofreading activity in the context of Pol-delta3 compared with that of Pol-delta4 (PubMed:19074196, PubMed:20334433). Although both Pol-delta3 and Pol-delta4 process Okazaki fragments in vitro, Pol-delta3 may be better suited to fulfill this task, exhibiting near-absence of strand displacement activity compared to Pol-delta4 and stalling on encounter with the 5'-blocking oligonucleotides. Pol-delta3 idling process may avoid the formation of a gap, while maintaining a nick that can be readily ligated (PubMed:24035200). Along with DNA polymerase kappa, DNA polymerase delta carries out approximately half of nucleotide excision repair (NER) synthesis following UV irradiation (PubMed:20227374). Under conditions of DNA replication stress, in the presence of POLD3 and POLD4, may catalyze the repair of broken replication forks through break-induced replication (BIR) (PubMed:24310611). Involved in the translesion synthesis (TLS) of templates carrying O6-methylguanine, 8oxoG or abasic sites (PubMed:19074196, PubMed:24191025). {ECO:0000269|PubMed:16510448, ECO:0000269|PubMed:19074196, ECO:0000269|PubMed:20227374, ECO:0000269|PubMed:20334433, ECO:0000269|PubMed:24022480, ECO:0000269|PubMed:24035200, ECO:0000269|PubMed:24191025, ECO:0000269|PubMed:24310611}.
Molecular Weight:	123.6 kDa
UniProt:	P28340
Pathways:	Telomere Maintenance, DNA Damage Repair, DNA Replication, Chromatin Binding, Synthesis of DNA

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.
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