

Datasheet for ABIN7555014
POLH Protein (AA 1-713) (His tag)



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Overview

Quantity:	1 mg
Target:	POLH
Protein Characteristics:	AA 1-713
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This POLH protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant POLH Protein expressed in mammalian cells.
Sequence:	<p>MATGQDRVVA LVDMDCEFFVQ VEQRQNPHLR NKPCAVVQYK SWKGGGIIAV SYEARAFGVT</p> <p>RSMWADDAKK LCPDLLLAQV RESRGKANLT KYREASVEVM EIMSRFAVIE RASIDEAYVD</p> <p>LTSVQERLQ KLQGQPISAD LLPSTYIEGL PQGPTTAEET VQKEGMRKQG LFQWLDSLQI</p> <p>DNLTSPDLQL TVGAVIVEEM RAAIERETGF QCSAGISHNK VLAKLACGLN KPNRQTLVSH</p> <p>GSVPQLFSQM PIRKIRSLGG KLGASVIEIL GIEYMGELTQ FTESQLQSHF GEKNGSWLYA</p> <p>MCRGIEHDPV KPRQLPKTIG CSKNFPGKTA LATREQVQWW LLQLAQELEE RLTKDRNDND</p> <p>RVATQLVSI RVQGDKRLSS LRRCCALTRY DAHKMSHDAF TVIKNCNTSG IQTEWSPPLT</p> <p>MLFLCATKFS ASAPSSSTDI TSFLSSDPSS LPKVPVTSSE AKTQGSGPAV TATKKATTSL</p> <p>ESFFQKAAER QKVKEASLSS LTAPTQAPMS NSPSKPSLPF QTSQSTGTEP FFKQKSLLLK</p> <p>QKQLNNSSVS SPQQNPWSNC KALPNSLPTE YPGCVPVCEG VSKLEESSKA TPAEMDLAHN</p> <p>SQSMHASSAS KSVLEVTQKA TPNPSLLAAE DQVPCEKCGS LVPVWDMPEH MDYHFALELQ</p> <p>KSFLQPHSSN PQVVSASHQ GKRNPKSPLA CTNKRPRPEG MQTLESFFKP LTH Sequence</p>

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:	<p>Key Benefits:</p> <ul style="list-style-type: none">• 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). <p>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.</p> <p>If you are not interested in a full length protein, please contact us for individual protein fragments.</p> <p>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.</p>
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	POLH
Alternative Name:	POLH (POLH Products)
Background:	DNA polymerase eta (EC 2.7.7.7) (RAD30 homolog A) (Xeroderma pigmentosum variant type protein),FUNCTION: DNA polymerase specifically involved in the DNA repair by translesion synthesis (TLS) (PubMed:10385124, PubMed:11743006, PubMed:24449906, PubMed:24553286, PubMed:16357261). Due to low processivity on both damaged and normal DNA, cooperates with the heterotetrameric (REV3L, REV7, POLD2 and POLD3) POLZ complex for complete bypass of DNA lesions. Inserts one or 2 nucleotide(s) opposite the lesion, the primer is further extended by the tetrameric POLZ complex. In the case of 1,2-intrastrand d(GpG)-cisplatin cross-link, inserts dCTP opposite the 3' guanine (PubMed:24449906).

Target Details

Particularly important for the repair of UV-induced pyrimidine dimers (PubMed:10385124, PubMed:11743006). Although inserts the correct base, may cause base transitions and transversions depending upon the context. May play a role in hypermutation at immunoglobulin genes (PubMed:11376341, PubMed:14734526). Forms a Schiff base with 5'-deoxyribose phosphate at abasic sites, but does not have any lyase activity, preventing the release of the 5'-deoxyribose phosphate (5'-dRP) residue. This covalent trapping of the enzyme by the 5'-dRP residue inhibits its DNA synthetic activity during base excision repair, thereby avoiding high incidence of mutagenesis (PubMed:14630940). Targets POLI to replication foci (PubMed:12606586). {ECO:0000269|PubMed:10385124, ECO:0000269|PubMed:11376341, ECO:0000269|PubMed:11743006, ECO:0000269|PubMed:12606586, ECO:0000269|PubMed:14630940, ECO:0000269|PubMed:14734526, ECO:0000269|PubMed:16357261, ECO:0000269|PubMed:24449906, ECO:0000269|PubMed:24553286}.

Molecular Weight:	78.4 kDa
UniProt:	Q9Y253
Pathways:	DNA Damage Repair

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