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Datasheet for ABIN7547231
POLD2 Protein (AA 1-469) (His tag)

Overview

Quantity:	1 mg
Target:	POLD2
Protein Characteristics:	AA 1-469
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This POLD2 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant POLD2 Protein expressed in mammalian cells.
Sequence:	MFSEQAAQRA HTLLSPPSAN NATFARVPVA TYTNSSQPFR LGERSFSRQY AHYATRLIQ MRPFLENRAQ QHWGSGVGK KLCELQPEEK CCVVGTLFKA MPLQPSILRE VSEEHNLLPQ PPRSKYIHPD DELVLEDELQ RIKLKGITDV SKLVTGTVLA VFGSVRDDGK FLVEDYCFAD LAPQKPAPPL DTDRFVLLVS GLGLGGGGGE SLLGTQLLVD VVTGQLGDEG EQCSAAHVSR VILAGNLLSH STQSRDSINK AKYLTKKTQA ASVEAVKMLD EILLQLSASV PVDVMPGEFD PTNYTLPQQP LHPCMFLAT AYSTLQLVTN PYQATIDGVR FLGTSGQNVS DIFRYSSMED HLEILEWTLR VRHISPTAPD TLGCYPFYKT DPFIFPECPH VYFCGNTPSF GSKIIRGPED QTVLLVTPD FSATQACLV NLRSLACQPI SFGFGAEDD DLGGLGLGP 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

Product Details

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:

POLD2

Alternative Name:

POLD2 ([POLD2 Products](#))

Background:

DNA polymerase delta subunit 2 (DNA polymerase delta subunit p50),FUNCTION: Accessory component of both the DNA polymerase delta complex and the DNA polymerase zeta complex (PubMed:22801543, PubMed:17317665, PubMed:24449906). As a component of the trimeric and tetrameric DNA polymerase delta complexes (Pol-delta3 and Pol-delta4, respectively), plays a role in high fidelity genome replication, including in lagging strand synthesis, and repair (PubMed:12403614, PubMed:16510448, PubMed:19074196, PubMed:20334433, PubMed:24035200). Pol-delta3 and Pol-delta4 are characterized by the absence or the presence of POLD4. They exhibit differences in catalytic activity. Most notably, Pol-delta3 shows higher proofreading activity than Pol-delta4 (PubMed:19074196, PubMed:20334433). Although both Pol-delta3 and Pol-delta4 process Okazaki fragments in vitro, Pol-delta3 may also 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-

Target Details

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, required for the repair of broken replication forks through break-induced replication (BIR) (PubMed:24310611). Involved in the translesion synthesis (TLS) of templates carrying O6-methylguanine or abasic sites performed by Pol-delta4, independently of DNA polymerase zeta (REV3L) or eta (POLH). Facilitates abasic site bypass by DNA polymerase delta by promoting extension from the nucleotide inserted opposite the lesion. Also involved in TLS as a component of the DNA polymerase zeta complex (PubMed:24449906). Along with POLD3, dramatically increases the efficiency and processivity of DNA synthesis of the DNA polymerase zeta complex compared to the minimal zeta complex, consisting of only REV3L and REV7 (PubMed:24449906). {ECO:0000269|PubMed:12403614, ECO:0000269|PubMed:16510448, ECO:0000269|PubMed:19074196, ECO:0000269|PubMed:20227374, ECO:0000269|PubMed:20334433, ECO:0000269|PubMed:24035200, ECO:0000269|PubMed:24310611, ECO:0000269|PubMed:24449906}.

Molecular Weight: 51.3 kDa

UniProt: [P49005](#)

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