

Product datasheet for **TP507508**

Pold2 (NM_008894) Mouse Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Mouse polymerase (DNA directed), delta 2, regulatory subunit (Pold2), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug
Species:	Mouse
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>MR207508 protein sequence Red =Cloning site Green =Tags(s) MFSEQAAQRAHTLLAPPSASNATFARVPVATYTNSSQPFLGERSFNRQYAHYATR LIQMRPFLVSRAQ QHWGSRVEVKKLCELQPGEQCCVGT LFKAMSLQPSILREISEEHNLPQPPRSKYIHPDDELVLEDELQ RIKLKG TIDVSKLVTGTVLAVLGS AKDDGRFQVEDHCFADLAPQKPVPPLDTRFVLLVSG LGLGGGGGE SLLGTQLLVDVVTGQLGDEGEQCSAAHVSRVILAGNLLSHNTQSRDSINKAKYLT KKTQAASVEAVKMLD EILLQLSASVPVDVMPGEFDPTNYTLPQQPLHPCMFPLATAYSTLQLVTNPYQATIDGVRFLGTSGQNVS DIFRYSSMEDHLEILEWTLRVRHISPTAPDTLGCYPFYKTDPFIFPECPHYVFCGNTPSFGSKIIRGPED QVLLVAVPDFSSTQTACLVNLRSLACQPISFAGFGAEQEDLEGLGLGP TR TRPLEQKLISEEDLAANDILDYKDDDDKV
Tag:	C-MYC/DDK
Predicted MW:	51.4 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C after receiving vials.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	<u>NP_032920</u>
Locus ID:	18972


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UniProt ID: [O35654](#)

RefSeq Size: 1634

Cytogenetics: 11 A1

RefSeq ORF: 1407

Synonyms: 50kDa; p50; po1D2

Summary: 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. 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. 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-delta3 idling process may avoid the formation of a gap, while maintaining a nick that can be readily ligated. Along with DNA polymerase kappa, DNA polymerase delta carries out approximately half of nucleotide excision repair (NER) synthesis following UV irradiation. Under conditions of DNA replication stress, required for the repair of broken replication forks through break-induced replication (BIR). 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 POLZ complex. Along with POLD3, dramatically increases the efficiency and processivity of DNA synthesis of the minimal DNA polymerase zeta complex, consisting of only REV3L and REV7. [UniProtKB/Swiss-Prot Function]