

DNA Polymerase delta, catalytic subunit Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54287**Specification****DNA Polymerase delta, catalytic subunit Polyclonal Antibody - Product Information**

Application	IHC-P
Primary Accession	P28340
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	123631

DNA Polymerase delta, catalytic subunit Polyclonal Antibody - Additional Information**Gene ID** 5424**Other Names**

DNA polymerase delta catalytic subunit, 2.7.7.7, 3'-5' exodeoxyribonuclease, 3.1.11.-, DNA polymerase subunit delta p125, POLD1 (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=9175 target="_blank">HGNC:9175), POLD

Format

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glycerol

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

DNA Polymerase delta, catalytic subunit Polyclonal Antibody - Protein Information**Name** POLD1 ([HGNC:9175](#))**Synonyms** POLD**Function**

As the catalytic component of the trimeric (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](http://www.uniprot.org/citations/16510448), PubMed: [19074196](http://www.uniprot.org/citations/19074196), PubMed: [20334433](http://www.uniprot.org/citations/20334433), PubMed: [24022480](http://www.uniprot.org/citations/24022480), PubMed: [24035200](http://www.uniprot.org/citations/24035200)). 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).

Cellular Location

Nucleus Note=Colocalizes with PCNA and POLD3 at S phase replication sites (PubMed:11595739). After UV irradiation, recruited to DNA damage sites within 2 hours, independently on the cell cycle phase, nor on PCNA ubiquitination. This recruitment requires POLD3, PCNA and RFC1- replication factor C complex (PubMed:20227374, PubMed:22801543)

Tissue Location

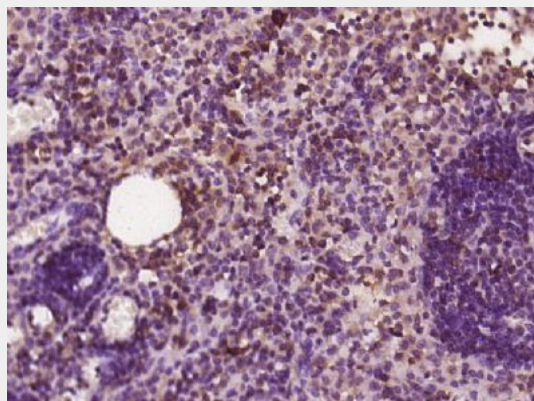
Widely expressed, with high levels of expression in heart and lung.

DNA Polymerase delta, catalytic subunit Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

DNA Polymerase delta, catalytic subunit Polyclonal Antibody - Images



Paraformaldehyde-fixed, paraffin embedded (mouse lymphoid); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CDC2) Polyclonal Antibody, Unconjugated (bs-10580R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.