



Rabbit Anti-DNA Polymerase delta, catalytic subunit antibody

SL10580R

Product Name:	DNA Polymerase delta, catalytic subunit
Chinese Name:	DNA聚合酶 δ 催化亚单位/DNA pol δ cat抗体
Alias:	CDC2; CDC2 homolog; DNA directed DNA polymerase delta 1; DNA directed polymerase delta 1; DNA pol delta 1; DNA polymerase delta catalytic subunit; DNA polymerase subunit delta p125; DPOD1_HUMAN; POLD; POLD 1; POLD1; Polymerase (DNA directed) delta 1 catalytic subunit 125kDa; Polymerase DNA directed delta 1 catalytic subunit 125kD.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human, Mouse, Rat, Dog, Pig, Cow, Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	124kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human DNA Polymerase delta, catalytic subunit:751-850/1107
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. 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.
PubMed:	PubMed

DNA replication, recombination and repair, all of which are necessary for genome stability, require the presence of exonucleases (1). In DNA replication, these enzymes are involved in the processing of Okazaki fragments, whereas in DNA repair, they function to excise damaged DNA fragments and correct recombinational mismatches (2). Exonucleases involved in these processes include DNA polymerases, including DNA pol α and ϵ . DNA pol α consists of two subunits, p125 which interacts directly with the sliding DNA clamp protein PCNA, and p50 (3,4). DNA pol α can be regulated by cell cycle proteins (5). DNA pol ϵ is a multiple subunit enzyme, the catalytic subunit of which is encoded by the POL2 gene (6,7). The exact reactions catalyzed by DNA pol α and ϵ on leading and lagging strands have not yet been elucidated.

Function:

Possesses two enzymatic activities: DNA synthesis (polymerase) and an exonucleolytic activity that degrades single stranded DNA in the 3'- to 5'-direction. Required with its accessory proteins (proliferating cell nuclear antigen (PCNA) and replication factor C (RFC) or activator 1) for leading strand synthesis. Also involved in completing Okazaki fragments initiated by the DNA polymerase alpha/primase complex.

Subunit:

Heterotetramer composed of subunits of 125 kDa, 50 kDa, 66 kDa and 12 kDa. The 125 kDa subunit contains the polymerase active site and most likely the active site for the 3'-5' exonuclease activity. Interacts with WRNIP1. Interacts with POLD4 and PCNA.

Subcellular Location:

Nucleus.

Similarity:

Belongs to the DNA polymerase type-B family.
Contains 1 CysA-type zinc finger.

SWISS:

P28340

Gene ID:

5424

Database links:

[Entrez Gene: 5424](#)Human

[Entrez Gene: 18971](#)Mouse

[Omin: 174761](#)Human

[SwissProt: P28340](#)Human

[SwissProt: P52431](#)Mouse

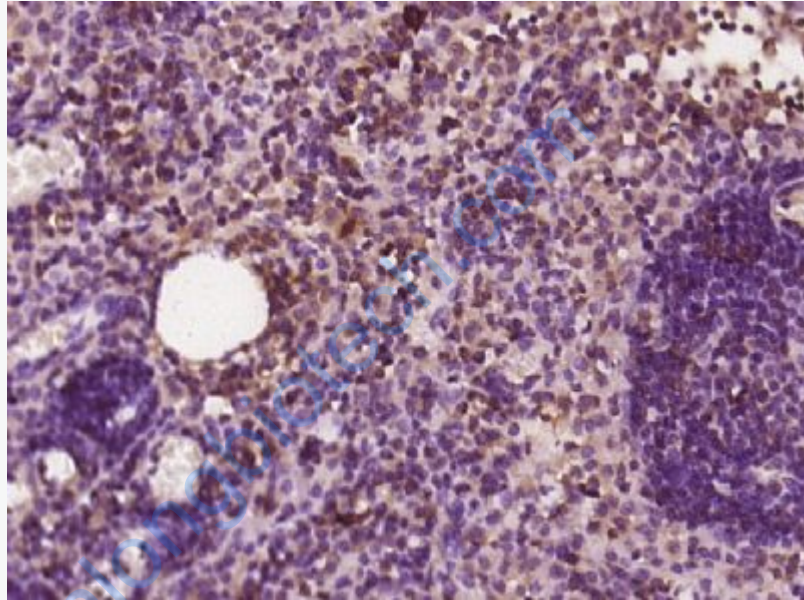
Product Detail:

[Unigene: 279413](#)Human

[Unigene: 16549](#)Mouse

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.



Picture:

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 (SL10580R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.