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Rabbit Anti-DNA Polymerase delta , catalytic subunit/Cy5.5 Conjugated antibody

SL10580R-Cy5.5

Product Name	Anti-DNA Polymerase delta, catalytic subunit/Cy5.5
Chinese Name	Cy5.5 标记的 DNA 聚合酶δ催化亚单位/DNA polδcat 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.
Research Area	Cell biology Epigenetics
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Mouse(predicted:Human,Rat,Dog,Pig,Cow,Sheep)
Applications	IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	124kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human DNA Polymerase delta, catalytic subunit
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% 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 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Product Detail	**background:** 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 ∂ and é. DNA pol ∂ consists of two subunits, p125 which interacts directly with the sliding DNA clamp protein PCNA, and p50 (3,4). DNA pol ∂ can be regulated by cell cycle proteins (5). DNA pol é 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 ∂ and é 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.

Database links:

Entrez Gene: 5424 Human

Entrez Gene: 18971 Mouse

Omim: 174761 Human

SwissProt: P28340 Human

SwissProt: P52431 Mouse

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.