

Product Information

Anti-DNA polymerase δ p50 antibody, Rat monoclonal
clone PDK 7B4, purified from hybridoma cell culture

Catalog Number **SAB4200054**

Product Description

Anti-DNA polymerase δ p50 (rat IgG2a isotype) is derived from the hybridoma PDK 7B4 produced by the fusion of mouse myeloma cells (P3X63Ag8.653) and splenocytes from rat immunized with human p50 (GeneID: 5425). The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Anti-DNA polymerase δ p50 recognizes human DNA polymerase δ p50. The product may be used in several immunochemical techniques including immunoblotting (~ 50 kDa), immunoprecipitation and immunocytochemistry.¹⁻²

In eukaryotic cells, DNA polymerases are required for maintaining the integrity of the genome during processes such as DNA replication, DNA repair, DNA synthesis, DNA recombination, and also in regulatory events, such as cell cycle control and DNA damage checkpoint function. The DNA polymerase δ complex is involved in DNA replication and repair. It consists of the proliferating cell nuclear antigen (PCNA), the multi-subunit replication factor C, and the 4 subunit DNA polymerase complex: POLD1, POLD2, POLD3 and POLD4.

The core DNA polymerase δ exists as a heterodimeric enzyme with subunits of 125 and 50 kDa. The 125 kDa catalytic subunit contains the DNA polymerase and the 3' to 5' exonuclease active sites, and the 50 kDa subunit is of unknown function. The heterodimeric core enzyme (p125/p50), which is essentially distributive, can be transformed into a highly processive DNA polymerase by PCNA. The functional interaction of DNA pol δ with PCNA is mediated through interaction with the 50 kDa subunit of the enzyme.^{4, 5}

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at -20 °C. For continuous use, the product may be stored at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 0.5-1.0 μ g/mL is recommended using HeLa cell extracts.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Bauerschmidt, C., et al., *Genes to Cells*, **12**, 745-758 (2007).
2. Pollok, S., et al., *FEBS J.*, **274**, 3669-3684 (2007).
3. Liu, H., et al., *BMC Cancer*, **253**, 1-13 (2008).
4. Hübscher, U., et al., *Trends Biochem. Sci.*, **25**, 143-147 (2000).
5. Lu, X., et al., *J. Biol. Chem.*, **277**, 24340-24345 (2002).

RC,GG,TD,KAA,PHC 04/21-1