SANTA CRUZ BIOTECHNOLOGY, INC.

DNA pol δ cat (A-19): sc-8798

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

DNA replication, recombination and repair, all of which are necessary for genome stability, require the presence of exonucleases. 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. Exonucleases involved in these processes include DNA polymerases, including DNA pol δ and ε. DNA pol δ consists of two subunits-p125 which interacts directly with the sliding DNA clamp protein PCNA, and p50. DNA pol δ can be regulated by cell cycle proteins. DNA pol ε is a multiple subunit enzyme, the catalytic subunit of which is encoded by the POL2 gene. The exact reactions catalyzed by DNA pol δ and ε on leading and lagging strands have not yet been elucidated.

REFERENCES

1. Lee, M.Y., et al. 1984. Further studies on calf thymus DNA polymerase δ purified to homogeneity by a new procedure. Biochemistry 23: 1906-1913.
2. Hamatake, R.K., et al. 1990. Purification and characterization of DNA polymerase II from the yeast *Saccharomyces cerevisiae*. Identification of the catalytic core and a possible holoenzyme form of the enzyme. J. Biol. Chem. 265: 4072-4083.
3. Goulian, M., et al. 1990. Discontinuous DNA synthesis by purified mammalian proteins. J. Biol. Chem. 265: 18461-18471.
4. Morrison, A., et al. 1990. A third essential DNA polymerase in *S. cerevisiae*. Cell 62: 1143-1151.
5. Zeng, X.R., et al. 1994. Regulation of human DNA polymerase δ during the cell cycle. J. Biol. Chem. 269: 24027-24033.

CHROMOSOMAL LOCATION

Genetic locus: Pold1 (mouse) mapping to 7 B4.

SOURCE

DNA pol δ cat (A-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DNA pol δ cat of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8798 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

DNA pol δ cat (A-19) is recommended for detection of DNA pol δ cat of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). DNA pol δ cat (A-19) is also recommended for detection of DNA pol δ cat in additional species, including equine.

Suitable for use as control antibody for DNA pol δ cat siRNA (m): sc-37778, DNA pol δ cat shRNA Plasmid (m): sc-37778-SH and DNA pol δ cat shRNA (m) Lentiviral Particles: sc-37778-V.

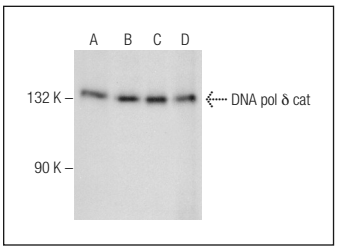
Molecular Weight of DNA pol δ cat: 125 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, CTLL-2 cell lysate: sc-2242 or NIH/3T3 nuclear extract: sc-2138.

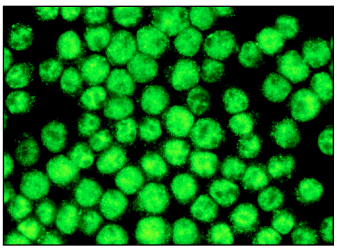
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



DNA pol δ cat (A-19): sc-8798. Western blot analysis of DNA pol δ cat expression in NIH/3T3 (**A**) and RAW 264.7 (**B**) nuclear extracts and CTLL-2 whole cell lysate (**C**) and mouse embryo tissue extract (**D**).



DNA pol δ cat (A-19): sc-8798. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear localization.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS Satisfaction Guaranteed

Try **DNA pol δ cat (H-8): sc-374025** or **DNA pol δ cat (F-9): sc-373731**, our highly recommended monoclonal alternatives to DNA pol δ cat (A-19).