

DNA pol δ cat (N-19): sc-8796

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. Goulian, M., et al. 1990. Discontinuous DNA synthesis by purified mammalian proteins. *J. Biol. Chem.* 265: 18461-18471.

CHROMOSOMAL LOCATION

Genetic locus: POLD1 (human) mapping to 19q13.33.

SOURCE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-8796 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DNA pol δ cat (N-19) is recommended for detection of DNA pol δ cat of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DNA pol δ cat siRNA (h): sc-37777, DNA pol δ cat shRNA Plasmid (h): sc-37777-SH and DNA pol δ cat shRNA (h) Lentiviral Particles: sc-37777-V.

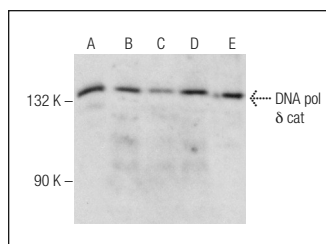
Molecular Weight of DNA pol δ cat: 125 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, MOLT-4 nuclear extract: sc-2151 or HeLa nuclear extract: sc-2120.

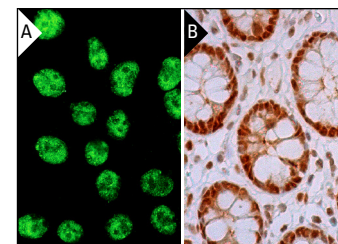
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



DNA pol δ cat (N-19): sc-8796. Western blot analysis of DNA pol δ cat expression in HeLa (A), Jurkat (B), HL-60 (C), K-562 (D) and MOLT-4 (E) nuclear extracts.



DNA pol δ cat (N-19): sc-8796. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing nuclear staining of glandular cells and endothelial cells (B).

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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



Try **DNA pol δ cat (A-9): sc-17776** or **DNA pol δ cat (H-8): sc-374025**, our highly recommended monoclonal alternatives to DNA pol δ cat (N-19).