SANTA CRUZ BIOTECHNOLOGY, INC.

DNA pol β (N-19): sc-5925

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

DNA replication, recombination and repair, all of which are necessary for genomic 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. These exonucleases include the family of DNA polymerases. DNA pol α, β, δ, and ε are involved in DNA replication and repair. DNA pol δ and DNA pol e are multisubunit enzymes, with DNA pol δ consisting of two subunits p125, which interacts with the sliding DNA clamp protein PCNA, and p50. The nuclear-encoded DNA pol γ is the only DNA polymerase required for the replication of the mitochondrial DNA. DNA pol ω is ubiquitously expressed in various tissues and mediates the cellular mechanism of damage-induced mutagenesis. DNA pol θ is a DNA polymerase-helicase that binds ATP and is involved in the repair of interstrand crosslinks.

CHROMOSOMAL LOCATION

Genetic locus: POLB (human) mapping to 8p11.21; Polb (mouse) mapping to 8 A2.

SOURCE

DNA pol β (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DNA pol β of human 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-5925 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DNA pol β (N-19) is recommended for detection of DNA pol β of mouse, rat and human 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 β (N-19) is also recommended for detection of DNA pol β in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DNA pol β siRNA (h): sc-37773, DNA pol β siRNA (m): sc-37774, DNA pol β shRNA Plasmid (h): sc-37773-SH, DNA pol β shRNA Plasmid (m): sc-37774-SH, DNA pol β shRNA (h) Lentiviral Particles: sc-37773-V and DNA pol β shRNA (m) Lentiviral Particles: sc-37774-V.

Molecular Weight of DNA pol β: 39 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, K-562 nuclear extract: sc-2130 or A-431 nuclear extract: sc-2122.

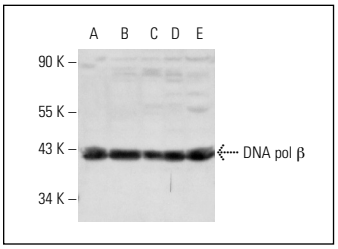
RESEARCH USE

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

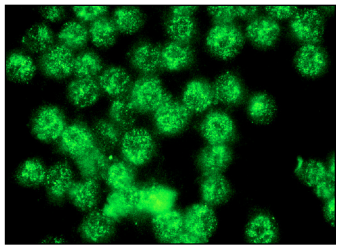
STORAGE

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

DATA



DNA pol β (N-19): sc-5925. Western blot analysis of DNA pol β expression in A-431 (**A**), Jurkat (**B**), K-562 (**C**), KNRK (**D**) and NIH/3T3 (**E**) nuclear extracts.



DNA pol β (N-19): sc-5925. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Date, H., et al. 2004. The FHA domain of Aprataxin interacts with the C-terminal region of XRCC1. Biochem. Biophys. Res. Commun. 325: 1279-1285.
2. Verdun, R.E., et al. 2006. The DNA damage machinery and homologous recombination pathway act consecutively to protect human telomeres. Cell 127: 709-720.
3. Mukherjee, S., et al. 2007. A mechanistic approach for modulation of arsenic toxicity in human lymphocytes by curcumin, an active constituent of medicinal herb *Curcuma longa* Linn. 41: 32-42.
4. Métivier, R., et al. 2008. Cyclical DNA methylation of a transcriptionally active promoter. Nature 452: 45-50.

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **DNA pol β (D-11): sc-376581**, our highly recommended monoclonal alternative to DNA pol β (N-19).