

DNA pol λ (V-17): sc-21531

BACKGROUND

DNA polymerase lambda (pol λ), also designated DNA polymerase κ or pol β 2, is a low-fidelity polymerase which plays a role in both spontaneous and DNA damage-induced mutagenesis. Encoded by the POLL gene, pol λ is a member of the DNA polymerase type-X family. Pol λ extends primer-terminal mismatches opposite nondamaged DNA templates, suggesting that it may assist in extending mismatched base pairs during normal DNA replication. In addition, pol λ may play a role in the mutagenic bypass of T-T dimers. Proliferating cell nuclear antigen (PCNA), a protein essential to DNA replication, interacts with pol λ and thus influences the ability of pol λ to synthesize DNA.

REFERENCES

- Zhang, Y., et al. 2000. Human DNA polymerase κ synthesizes DNA with extraordinarily low fidelity. *Nucleic Acids Res.* 28: 4147-4156.
- Ohashi, E., et al. 2000. Fidelity and processivity of DNA synthesis by DNA polymerase κ , the product of the human DINB1 gene. *J. Biol. Chem.* 275: 39678-39684.
- O-Wang, J., et al. 2001. DNA polymerase κ , implicated in spontaneous and DNA damage-induced mutagenesis, is overexpressed in lung cancer. *Cancer Res.* 61: 5366-5369.
- Paunesku, T., et al. 2001. Proliferating cell nuclear antigen (PCNA): ring-master of the genome. *Int. J. Radiat. Biol.* 77: 1007-1021.
- Ogi, T., et al. 2001. Expression of human and mouse genes encoding pol κ : testis-specific developmental regulation and AhR-dependent inducible transcription. *Genes Cells* 6: 943-953.

CHROMOSOMAL LOCATION

Genetic locus: POLL (human) mapping to 10q24.32; Poll (mouse) mapping to 19 C3.

SOURCE

DNA pol λ (V-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of DNA pol λ 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-21531 P, (100 μ g 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 λ (V-17) is recommended for detection of DNA pol λ of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

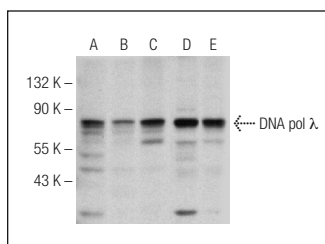
DNA pol λ (V-17) is also recommended for detection of DNA pol λ in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for DNA pol λ siRNA (h): sc-43729, DNA pol λ siRNA (m): sc-37788, DNA pol λ siRNA Plasmid (h): sc-43729-SH, DNA pol λ siRNA Plasmid (m): sc-37788-SH, DNA pol λ siRNA (h) Lentiviral Particles: sc-43729-V and DNA pol λ siRNA (m) Lentiviral Particles: sc-37788-V.

Molecular Weight of DNA pol λ : 68 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, A549 cell lysate: sc-2413 or HeLa whole cell lysate: sc-2200.

DATA



DNA pol λ (V-17): sc-21531. Western blot analysis of DNA pol λ expression in A549 (A), MCF7 (B) and HeLa (C) whole cell lysates and A549 (D) and MCF7 (E) nuclear extracts.

SELECT PRODUCT CITATIONS

- Ohba, T., et al. 2009. Expression of an X-family DNA polymerase, pol lambda, in the respiratory epithelium of non-small cell lung cancer patients with habitual smoking. *Mutat. Res.* 677: 66-71.

RESEARCH USE

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

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Try **DNA pol λ (E-11): sc-373844**, our highly recommended monoclonal alternative to DNA pol λ (V-17).