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Anti-POLB (DNA polymerase beta) (RABBIT) Antibody
POLB Antibody
Catalog # ASR5510

Specification

Anti-POLB (DNA polymerase beta) (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, E, I, LCI**
Application Note	**This affinity purified POLß antibody has been tested by ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 38.1 kDa in size corresponding to POLß by western blotting in the appropriate cell lysate or extract.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**This affinity-purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a region near the C-terminus of the POLß protein.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-POLB (DNA polymerase beta) (RABBIT) Antibody - Additional Information

Gene ID 5423

Other Names
5423

Purity
This product was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody reacts with overexpressed and endogenous POLß protein. A BLAST analysis was used to suggest reactivity with POLß from human, bovine, and Xenopus laevis based on a 100% homology with the immunizing sequence. Cross-reactivity with POLß from other sources has not been determined.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-POLB (DNA polymerase beta) (RABBIT) Antibody - Protein Information

Name POLB

Function
Repair polymerase that plays a key role in base-excision repair (PubMed:10556592, PubMed:9207062, PubMed:9572863). During this process, the damaged base is excised by specific DNA glycosylases, the DNA backbone is nicked at the abasic site by an apurinic/apyrimidic (AP) endonuclease, and POLB removes 5'-deoxyribose-phosphate from the preincised AP site acting as a 5'-deoxyribose-phosphate lyase (5'-dRP lyase); through its DNA polymerase activity, it adds one nucleotide to the 3' end of the arising single-nucleotide gap (PubMed:10556592, PubMed:17526740, PubMed:9556598, PubMed:9572863, PubMed:9614142). Conducts 'gap-filling' DNA synthesis in a stepwise distributive fashion rather than in a processive fashion as for other DNA polymerases. It is also able to cleave sugar-phosphate bonds 3' to an intact AP site, acting as an AP lyase (PubMed:9614142).

Cellular Location
Nucleus. Cytoplasm. Note=Cytoplasmic in normal conditions. Translocates to the nucleus following DNA damage

Anti-POLB (DNA polymerase beta) (RABBIT) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-POLB (DNA polymerase beta) (RABBIT) Antibody - Images

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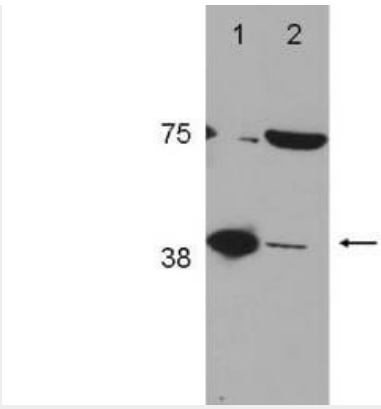

Western Blot of Rabbit Anti-POLß (DNA polymerase beta) Antibody (600-401-C65). Lane 1: LN428 FLAG POLß (control). Lane 2: A172 (p/n W09-001-GL5). Load: 35 µg per lane. Primary antibody: POLß antibody at 1:2000 for overnight at 4°C. Secondary antibody: IRDye800™ goat anti-rabbit at 1:10,000 for 45 min at RT. Block: 5% BLOTTO (p/n B501-0500) overnight at 4°C. Predicted/Observed size: ~40 kDa, ~40 kDa. Other band(s): unknown band ~75 kDa.

Anti-POLB (DNA polymerase beta) (RABBIT) Antibody - Background

The POLß protein belongs to the DNA polymerase type-X family. It is a DNA polymerase involved in gap-filling DNA synthesis or base excision and repair in a stepwise distributive fashion unlike other DNA polymerases. It is required for DNA maintenance, replication, recombination, and drug resistance. It is normally found as a monomer, in the cytoplasm and it translocates to the nucleus upon DNA damage.