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Anti-POLB Picoband Antibody

Catalog # ABO12498

Product Information

Application	WB
Primary Accession	P06746
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for DNA polymerase beta(POLB) detection. Tested with WB in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	5423
Other Names	DNA polymerase beta, 2.7.7.7, 4.2.99.-, POLB
Calculated MW	38178
Application Details	Western blot, 0.1-0.5 □g/ml, Human
Subcellular Localization	Nucleus. Cytoplasm. Cytoplasmic in normal conditions. Translocates to the nucleus following DNA damage.
Source	Eukaryota
Protein Name	DNA polymerase beta
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E.coli-derived human POLB recombinant protein (Position: L122-E335). Human POLB shares 95.3% and 94.9% amino acid (aa) sequence identity with mouse and rat POLB, respectively.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

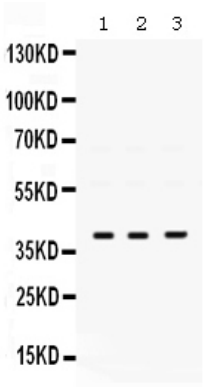
Protein Information

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:8841119, 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

Background

Polymerase (DNA directed), beta, also known as POLB, is an enzyme that, in humans, is encoded by the POLB gene. It is localized on 8p11.2. The protein encoded by this gene is a DNA polymerase involved in base excision and repair, also called gap-filling DNA synthesis. It is found that a truncated POLB is expressed in primary colorectal tumors and inhibits the normal repair function of wildtype POLB. The encoded protein, acting as a monomer, is normally found in the cytoplasm, but it translocates to the nucleus upon DNA damage. Several transcript variants of this gene exist, but the full-length nature of only one has been described to date. Additionally, human POLB forms a complex with and is methylated by PRMT6. In vitro, methylated POLB possesses significantly higher DNA polymerase activity when compared to that of unmodified enzyme. The increase in DNA polymerase activity upon methylation is due to the enhanced DNA binding and processivity of POLB.

Images



Anti- POLB Picoband antibody, ABO12498, Western blottingAll lanes: Anti POLB (ABO12498) at 0.5ug/mlLane 1: HELA Whole Cell Lysate at 40ugLane 2: JURKAT Whole Cell Lysate at 40ugLane 3: SMMC Whole Cell Lysate at 40ugPredicted bind size: 39KDObserved bind size: 39KD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.