

Anti-DNA Polymerase beta/POLB Antibody Picoband®

Catalog Number: PB9812

About POLB

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.

Overview

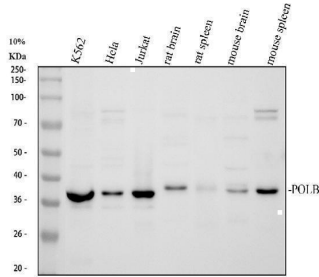
Product Name	Anti-DNA Polymerase beta/POLB Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-DNA Polymerase beta/POLB Antibody Picoband® catalog # PB9812. Tested in WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P06746

Technical Details

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.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG

Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

Anti-DNA Polymerase beta/POLB Antibody Picoband® (PB9812) Images



Western blot analysis of POLB using anti-POLB antibody (PB9812). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human K562 whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: human Jurkat whole cell lysates, Lane 4: rat brain tissue lysates, Lane 5: rat spleen tissue lysates, Lane 6: mouse brain tissue lysates, Lane 7: mouse spleen tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-POLB antigen affinity purified polyclonal antibody (PB9812) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for POLB at approximately 38 kDa. The expected band size for POLB is at 38 kDa.

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