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# Anti-DNA Ligase IV Rabbit Monoclonal Antibody

Catalog # ABO14573

## Product Information

| | |
|---|---|
| **Application** | WB, IHC, IF, ICC |
| **Primary Accession** | P49917 |
| **Host** | Rabbit |
| **Isotype** | Rabbit IgG |
| **Reactivity** | Human |
| **Clonality** | Monoclonal |
| **Format** | Liquid |
| **Description** | Anti-DNA Ligase IV Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF applications. This antibody reacts with Human. |

## Additional Information

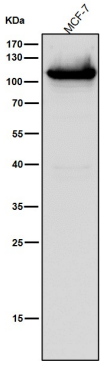
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|---|---|
| **Gene ID** | 3981 |
| **Other Names** | DNA ligase 4, 6.5.1.1 {ECO:0000255\|PROSITE-ProRule:PRU10135, ECO:0000269\|PubMed:23523427, ECO:0000269\|PubMed:29980672, ECO:0000269\|PubMed:9809069}, DNA ligase IV, Polydeoxyribonucleotide synthase [ATP] 4, LIG4 {ECO:0000303\|PubMed:16357942, ECO:0000312\|HGNC:HGNC:6601} |
| **Calculated MW** | 103971 |
| **Application Details** | WB 1:500-1:2000<br>IHC 1:50-1:200<br>ICC/IF 1:50-1:200 |
| **Source** | Eukaryota |
| **Contents** | Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA. |
| **Clone Names** | Clone: ADHG-12 |
| **Immunogen** | A synthesized peptide derived from human DNA Ligase IV |
| **Purification** | Affinity-chromatography |
| **Storage** | Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles. |

## Protein Information

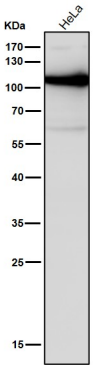
| | |
|---|---|
| **Name** | LIG4 {ECO:0000303\|PubMed:16357942, ECO:0000312\|HGNC:HGNC:6601} |

| | |
|---|---|
| **Function** | DNA ligase involved in DNA non-homologous end joining (NHEJ); required for double-strand break (DSB) repair and V(D)J recombination (PubMed:12517771, PubMed:17290226, PubMed:23523427, PubMed:29980672, PubMed:33586762, PubMed:8798671, PubMed:9242410, PubMed:9809069). Catalyzes the NHEJ ligation step of the broken DNA during DSB repair by resealing the DNA breaks after the gap filling is completed (PubMed:12517771, PubMed:17290226, PubMed:9242410, PubMed:9809069). Joins single-strand breaks in a double-stranded polydeoxynucleotide in an ATP-dependent reaction (PubMed:12517771, PubMed:17290226, PubMed:9242410, PubMed:9809069). LIG4 is mechanistically flexible: it can ligate nicks as well as compatible DNA overhangs alone, while in the presence of XRCC4, it can ligate ends with 2-nucleotides (nt) microhomology and 1-nt gaps (PubMed:17290226). Forms a subcomplex with XRCC4; the LIG4-XRCC4 subcomplex is responsible for the NHEJ ligation step and XRCC4 enhances the joining activity of LIG4 (PubMed:9242410, PubMed:9809069). Binding of the LIG4-XRCC4 complex to DNA ends is dependent on the assembly of the DNA-dependent protein kinase complex DNA-PK to these DNA ends (PubMed:10854421). LIG4 regulates nuclear localization of XRCC4 (PubMed:24984242). |
| **Cellular Location** | Nucleus |
| **Tissue Location** | Testis, thymus, prostate and heart. |

## Images

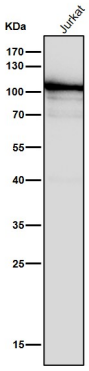


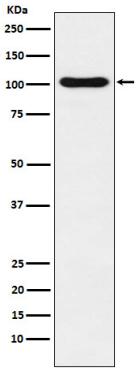

All lanes use the Antibody at 1:1k dilution for 1 hour at room temperature.




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Western blot analysis of DNA Ligase IV expression in Ramos cell lysate.

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