

DNA Ligase IV Rabbit mAb
Catalog # AP75364**Specification****DNA Ligase IV Rabbit mAb - Product Information**

Application	WB
Primary Accession	P49917
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	103971

DNA Ligase IV Rabbit mAb - Additional Information**Gene ID** 3981**Other Names**
LIG4**Dilution**
WB~~1/500-1/1000**Format**
Liquid**DNA Ligase IV Rabbit mAb - 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:12517771, PubMed:12517771).

[17290226](http://www.uniprot.org/citations/17290226), PubMed: [9242410](http://www.uniprot.org/citations/9242410), PubMed: [9809069](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/9242410), PubMed: [9809069](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/10854421)). LIG4 regulates nuclear localization of XRCC4 (PubMed: [24984242](http://www.uniprot.org/citations/24984242)).

Cellular Location

Nucleus

Tissue Location

Testis, thymus, prostate and heart.

DNA Ligase IV Rabbit mAb - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

DNA Ligase IV Rabbit mAb - Images



