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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

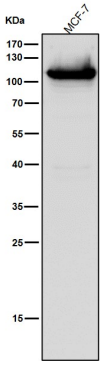
Gene ID	3981
Other Names	DNA ligase 4, 6.5.1.1 {ECO:0000255|PROSITE-ProRule:PRU10135, ECO:0000269|PubMed:23523427, ECO:0000269|PubMed:29980672, ECO:0000269|PubMed:9809069}, DNA ligase IV, Polydeoxyribonucleotide synthase [ATP] 4, LIG4 {ECO:0000303|PubMed:16357942, ECO:0000312|HGNC:HGNC:6601}
Calculated MW	103971
Application Details	WB 1:500-1:2000 IHC 1:50-1:200 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

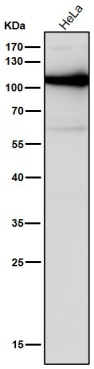
Name	LIG4 {ECO:0000303|PubMed:16357942, ECO:0000312|HGNC:HGNC:6601}

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

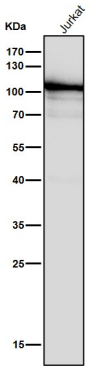


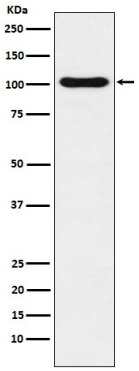
All lanes use the Antibody at 1:1k dilution for 1 hour at room temperature.



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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'.