LIG4 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	LIG4, Polyclonal Antibody
Full Product Name	LIG4 Antibody
Product Gene Name	anti-LIG4 antibody
Product Synonym Names	LIG4; DNA ligase 4; DNA ligase IV; PolydeoxyriboNucleotide synthase [ATP] 4
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid; In Phosphate Buffered Saline, 50% Glycerol, 0.5% BSA and 0.02% Sodium Azide.
Purity/Purification	Affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Preparation and Storage	Upon receipt, store at -20 degree C or -80 degree C. Avoid repeated freeze.
Molecular Weight	103,971 Da
Chromosome Location	Chromosome: 13; NC_000013.10 (108859790..108870716, complement). Location: 13q33-q34
OMIM	601837
3D Structure	ModBase 3D Structure for P49917
Immunogen	Synthesized peptide derived from human DNA Ligase IV around the non-phosphorylation site of T650.
Immunogen Species	Human
Conjugate	Non-conjugated
Product Categories/Family for anti-LIG4 antibody	Epigenetics and Nuclear Signaling
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-LIG4 antibody	Immunohistochemistry (IHC), ELISA (EIA)
Application Notes for anti-LIG4 antibody	IHC: 1:100-1:300 ELISA: 1:20000
Related Product Information for anti-LIG4 antibody	MBS7119768 is an antibody targeting LIG4. Also known as LIG4 Antibody. Reactive in Human. Host: Rabbit.
Other Notes	Small volumes of anti-LIG4 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for LIG4. It may not necessarily be applicable to this product.

NCBI GI #	148539894

NCBI GeneID	3981
NCBI Accession #	NP_001091738.1
UniProt Primary Accession #	P49917
UniProt Secondary Accession #	Q8IY66; Q8TEU5
UniProt Related Accession #	P49917
GenBank Nucleotide #	NM_001098268.1
NCBI Official Full Name	DNA ligase 4
NCBI Official Synonym Full Names	ligase IV, DNA, ATP-dependent
NCBI Official Symbol	LIG4
UniProt Protein Name	DNA ligase 4
UniProt Synonym Protein Names	DNA ligase IV; Polydeoxyribonucleotide synthase [ATP] 4
Protein Family	DNA ligase
UniProt Gene Name	LIG4
UniProt Entry Name	DNLI4_HUMAN
NCBI Protein Information	DNA ligase 4; sealase; DNA joinase; DNA ligase IV; DNA repair enzyme; polynucleotide ligase; polydeoxyribonucleotide synthase [ATP] 4
NCBI Summary for LIG4	The protein encoded by this gene is a DNA ligase that joins single-strand breaks in a double-stranded polydeoxynucleotide in an ATP-dependent reaction. This protein is essential for V(D)J recombination and DNA double-strand break (DSB) repair through nonhomologous end joining (NHEJ). This protein forms a complex with the X-ray repair cross complementing protein 4 (XRCC4), and further interacts with the DNA-dependent protein kinase (DNA-PK). Both XRCC4 and DNA-PK are known to be required for NHEJ. The crystal structure of the complex formed by this protein and XRCC4 has been resolved. Defects in this gene are the cause of LIG4 syndrome. Alternatively spliced transcript variants encoding the same protein have been observed. [provided by RefSeq, Jul 2008]
UniProt Comments for LIG4	LIG4: a DNA ligase that joins single-strand breaks in a double-stranded polydeoxynucleotide in an ATP-dependent reaction. Essential for V(D)J recombination and DNA double-strand break (DSB) repair through nonhomologous end joining (NHEJ). This protein forms a complex with the X-ray repair cross complementing protein 4 (XRCC4), and further interacts with the DNA-dependent protein kinase (DNA-PK). Both XRCC4 and DNA-PK are known to be required for NHEJ. Defects in this gene are the cause of LIG4 syndrome. Protein type: EC 6.5.1.1; Ligase Chromosomal Location of Human Ortholog: 13q33-q34 Cellular Component: nucleoplasm; DNA ligase IV complex; focal adhesion; cytoplasm; plasma membrane; condensed chromosome; DNA-dependent protein kinase complex; nucleus Molecular Function: protein C-terminus binding; protein binding; DNA binding; DNA ligase activity; metal ion binding; DNA ligase (ATP) activity; ATP binding; ligase activity Biological Process: central nervous system development; viral reproduction; somatic stem cell maintenance; T cell differentiation in the thymus; chromosome organization and biogenesis; double-strand break repair via nonhomologous end joining; DNA ligation; positive regulation of fibroblast proliferation; double-strand break repair; DNA ligation during DNA repair; response to gamma radiation; negative regulation of neuron apoptosis; DNA ligation during DNA recombination; response to X-ray; pro-B cell differentiation; single strand break repair; positive regulation of neurogenesis; V(D)J recombination; immunoglobulin V(D)J recombination; in utero embryonic development; isotype switching; cell cycle; DNA repair; lagging strand elongation; cell proliferation; neuron apoptosis; cell division; T cell receptor V(D)J recombination; nucleotide-excision repair, DNA gap filling Disease: Myeloma, Multiple; Lig4 Syndrome

Research Articles on LIG4	**1.** No association between LIG4 gene polymorphisms (rs1805386 T>C, rs1805389 C>T, rs1805388 C>T and rs2232641 A>G) and breast cancer risk.
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