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LIG3 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16089b

Product Information

Application	WB, E
Primary Accession	P49916
Other Accession	P97386, NP_039269.2, NP_002302.2
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB30286
Calculated MW	112907
Antigen Region	793-822

Additional Information

Gene ID	3980
Other Names	DNA ligase 3, DNA ligase III, Polydeoxyribonucleotide synthase [ATP] 3, LIG3
Target/Specificity	This LIG3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 793-822 amino acids from the C-terminal region of human LIG3.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	LIG3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LIG3
Function	Isoform 3 functions as a heterodimer with DNA-repair protein XRCC1 in the nucleus and can correct defective DNA strand-break repair and sister chromatid exchange following treatment with ionizing radiation and alkylating

	agents. Isoform 1 is targeted to mitochondria, where it functions as a DNA ligase in mitochondrial base-excision DNA repair (PubMed:10207110, PubMed:24674627).
Cellular Location	[Isoform 1]: Mitochondrion Note=Contains an N-terminal mitochondrial transit peptide [Isoform 3]: Nucleus. Note=Lacks the N-terminal mitochondrial transit peptide.
Tissue Location	Testis, thymus, prostate and heart.

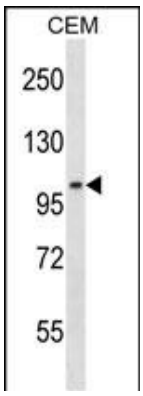
Background

This gene is a member of the DNA ligase family. Each member of this family encodes a protein that catalyzes the joining of DNA ends but they each have a distinct role in DNA metabolism. The protein encoded by this gene is involved in excision repair and is located in both the mitochondria and nucleus, with translation initiation from the upstream start codon allowing for transport to the mitochondria and translation initiation from a downstream start codon allowing for transport to the nucleus. Additionally, alternate transcriptional splice variants, encoding different isoforms, have been characterized.

References

Wang, W., et al. Nucleic Acids Res. (2010) In press :
Arora, M., et al. Leukemia 24(8):1470-1475(2010)
Cotner-Gohara, E., et al. Biochemistry 49(29):6165-6176(2010)
Ho-Pun-Cheung, A., et al. Pharmacogenomics J. (2010) In press :
Briggs, F.B., et al. Am. J. Epidemiol. 172(2):217-224(2010)

Images



LIG3 Antibody (C-term) (Cat. #AP16089b) western blot analysis in CEM cell line lysates (35ug/lane).This demonstrates the LIG3 antibody detected the LIG3 protein (arrow).