

Recombinant Human LIG3 protein, His-tagged

Cat. No. LIG3-26931TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant fragment, corresponding to amino acids 328-949 of Human DNA Ligase III with an N terminal His tag. Predicted MWt: 70 kDa.
Species	Human
Source	E.coli
ProteinLength	328-949 a.a.
Description	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.
Form	0.5% Trehalose, 6M Urea, 100mM Sodium phosphate, 10mM Sodium chloride, pH 4.5
AA Sequence	KLFSRIFNCNPDDMARDLEQGDVSETIRVFFEQSKSFPPAAKSLLTIQEV DEFLRLS KL TKEDEQQQALQDIASRCTANDLKCIIRLIKHDLMNSG AKHVLDALDPNAYEAFK ASRNL QDVVERVLHNAQEVEKEPGQRRALSV QASLMTPVQPMLAEACKSVEYAM KKCPNGMFSEI KYDGERVQVHKNGD HFSYFSRSLKPVLPHKVAHFKDYIPQAFPG

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GHSMILDSEVLLIDNK TG KPLPFGTLGVHKKAAFQDANVCLFVFDCIYFNDVSLMDR
 PLCERRKFLHD NMVEIPNR IMFSEMKRVTKALDLADMITRVIQEGLEGLVLKDVKGT
 YE PGKRHWLKVKKDYLNAGAMA DTADLVVLGAFYGGGSKGGMMSIFLMGC YDP
 GSQKWCTVTKCAGGHDDATLARLQNELDM VKISKDPSKIPSWLKV NKIYYPDFIVP
 DPKKAAVWEITGAEFKSEAHTADGISIRFPRC TRIR DDKDWKSATNLPQLKELYQL
 SKEKADFTVVAGDEGSSTTGGSSSEENKGPS GSAVSR KAPSKPSASTKKAEGKLSN
 SNSKDGNMQTAKPSAMKVGEKLA TKSSPVKVGEKRKAADET LCQTKRRPASEQR
 GRTVPAGRR

Storage Upon delivery aliquot and store at -80 centigrade. Avoid freeze / thaw cycles.

Reconstitution Reconstitute with 105 µl aqua dest.

GENE INFORMATION

Gene Name [LIG3 ligase III, DNA, ATP-dependent \[Homo sapiens \]](#)

Official Symbol [LIG3](#)

Synonyms LIG3; ligase III, DNA, ATP-dependent; LIG2, ligase II, DNA, ATP dependent; DNA ligase 3; ligase II, DNA, ATP-dependent; polydeoxyribonucleotide synthase [ATP] 3; LIG2;

Gene ID [3980](#)

mRNA Refseq [NM_002311](#)

Protein Refseq [NP_002302](#)

MIM [600940](#)

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UniProt ID	P49916
Chromosome Location	17q11.2-q12
Pathway	BER complex, organism-specific biosystem; BER complex, conserved biosystem; Base Excision Repair, organism-specific biosystem; Base excision repair, organism-specific biosystem; Base excision repair, conserved biosystem; DNA Repair, organism-specific biosystem; Resolution of AP sites via the single-nucleotide replacement pathway, organism-specific biosystem;
Function	ATP binding; DNA binding; DNA ligase (ATP) activity; DNA ligase activity; ligase activity; metal ion binding; nucleotide binding; protein binding; zinc ion binding;

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