

Human LIG4 Knockdown Cell Lysate

Cat. No. LIG4-226HKCL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	WB-validated LIG4 Knockdown HeLa Cell Lysate
Species	Human
Source	HeLa
Description	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.
Form	Cell-Tissue Lysis buffer
Molecular Mass	104 kDa
Notes	Instruction of use: This knockdown cell lysate should be paired with wild-type HeLa cell lysate for use. For Western blotting, we recommend running wild-type and knockdown lysates on the same gel, and loading each well with equal volume and equal amount of total proteins.

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Storage	Store at -20 centigrade for two years.
Concentration	Lot-specific
Shipping	Blue Ice
Components	1 vial of 100 µg WT HeLa cell lysate 1 vial of 100 µg LIG4 KD HeLa cell lysate
Protein Families	Druggable Genome
Protein Pathways	Non-homologous end-joining
Lysate QC	RT-qPCR; Western Blotting (WB)

GENE INFORMATION

Gene Name	LIG4 ligase IV, DNA, ATP-dependent [Homo sapiens (human)]
Official Symbol	LIG4
Synonyms	LIG4; ligase IV, DNA, ATP-dependent; DNA ligase 4; DNA joinase; DNA repair enzyme; polydeoxyribonucleotide synthase [ATP] 4; polynucleotide ligase; sealase; DNA ligase IV;
Gene ID	3981
mRNA Refseq	NM_001098268
Protein Refseq	NP_001091738
MIM	601837

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UniProt ID

P49917

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