

## Rabbit anti-Human, Mouse DNA Ligase IV Polyclonal Antibody | anti-DNA antibody

Phospho-DNA Ligase IV (Thr650) Antibody

| CATALOG # | HOST   | REACTIVITY   | APPLICATIONS                              |
|-----------|--------|--------------|-------------------------------------------|
| AAA329674 | Rabbit | Human, Mouse | ELISA, Immunohistochemistry, Western Blot |

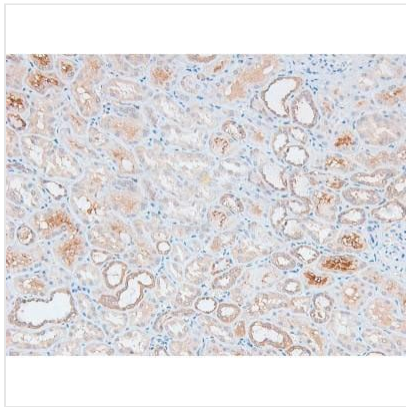
### PRODUCT SYNONYMS

DNA Ligase IV; Polyclonal Antibody; Phospho-DNA Ligase IV (Thr650) Antibody; DNA ligase IV ATP dependent; DNA joinase; DNA ligase 4; DNA ligase IV; DNA repair enzyme; DNL14\_HUMAN; LIG 4; LIG4; LIG4S; Ligase IV; Ligase IV DNA ATP dependent; Polydeoxyribonucleotide synthase [ATP] 4; Polydeoxyribonucleotide synthase 4; Polydeoxyribonucleotide synthase; Polynucleotide ligase; Sealase; anti-DNA antibody

### PRODUCT SPECIFICATIONS

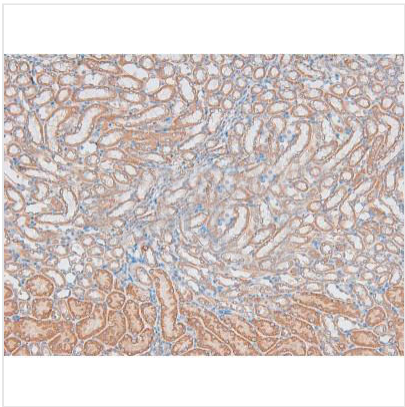
|                                               |                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                          | Rabbit                                                                                                                                                                                                                                                                                                                                                                 |
| Reactivity                                    | Human, Mouse                                                                                                                                                                                                                                                                                                                                                           |
| Clonality                                     | Polyclonal                                                                                                                                                                                                                                                                                                                                                             |
| Isotype                                       | Rabbit IgG                                                                                                                                                                                                                                                                                                                                                             |
| Specificity                                   | Phospho-DNA Ligase IV (Thr650) Antibody detects endogenous levels of DNA Ligase IV only when phosphorylated at Thr650.<br>Tissue Specificity: Testis, thymus, prostate and heart.                                                                                                                                                                                      |
| Purity/Purification                           | The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.                                                                                                                                                                                                         |
| Form/Format                                   | Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.                                                                                                                                                                                                                                                               |
| Concentration                                 | 1mg/ml (varies by lot)                                                                                                                                                                                                                                                                                                                                                 |
| Applicable Applications for anti-DNA antibody | ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)                                                                                                                                                                                                                                                                                                   |
| Immunogen                                     | A synthesized peptide derived from human DNA Ligase IV around the phosphorylation site of Thr650.                                                                                                                                                                                                                                                                      |
| Conjugation                                   | Unconjugated                                                                                                                                                                                                                                                                                                                                                           |
| Fragment                                      | Fab fragment                                                                                                                                                                                                                                                                                                                                                           |
| Subunit Structure                             | Interacts with XRCC4. The LIG4-XRCC4 complex has probably a 1:2 stoichiometry. The LIG4-XRCC4 complex associates in a DNA-dependent manner with the DNA-PK complex composed of PRKDC, XRCC6/Ku70 and XRCC5/Ku86 to form the core non-homologous end joining (NHEJ) complex. Additional components of the NHEJ complex include NHEJ1/XLF and PAXX. Interacts with APLF. |
| Similarity                                    | Belongs to the ATP-dependent DNA ligase family.                                                                                                                                                                                                                                                                                                                        |
| Subcellular Location                          | Nucleus.                                                                                                                                                                                                                                                                                                                                                               |
| Preparation and Storage                       | Store at -20 degree C. Stable for 12 months from date of receipt.                                                                                                                                                                                                                                                                                                      |

IMAGES



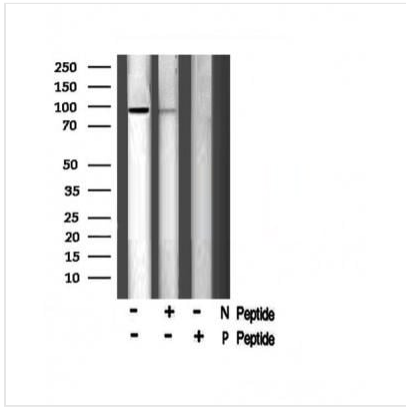
IHC (Immunohistochemistry)

At 1/200 staining Human kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

Staining Mouse kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of DNA Ligase 4 (Phospho-Thr650) using HepG2 whole cell lysates. -/+ means absence or presence of N peptide(¼ non-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-DNA antibody | Efficiently joins single-strand breaks in a double-stranded polydeoxynucleotide in an ATP-dependent reaction. Involved in DNA non-homologous end joining (NHEJ) required for double-strand break repair and V (D)J recombination. The LIG4-XRCC4 complex is responsible for the NHEJ ligation step, and XRCC4 enhances the joining activity of LIG4. 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. |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

NCBI AND UNIPROT INFORMATION

|                           |                        |
|---------------------------|------------------------|
| NCBI GI #                 | 148539894              |
| NCBI GeneID               | 3981                   |
| NCBI Accession #          | NP_001091738.1         |
| NCBI GenBank Nucleotide # | NM_001098268.1         |
| UniProt Accession #       | P49917; Q8IY66; Q8TEU5 |
| Molecular Weight          | 103,971 Da             |
| NCBI Official Full Name   | DNA ligase 4           |

|                                  |                                                                                                                                       |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| NCBI Official Synonym Full Names | ligase IV, DNA, ATP-dependent                                                                                                         |
| NCBI Official Symbol             | LIG4                                                                                                                                  |
| NCBI Protein Information         | DNA ligase 4; sealase; DNA joinase; DNA ligase IV; DNA repair enzyme; polynucleotide ligase; polydeoxyribonucleotide synthase [ATP] 4 |
| UniProt Protein Name             | DNA ligase 4                                                                                                                          |
| UniProt Gene Name                | LIG4                                                                                                                                  |
| UniProt Entry Name               | DNLI4_HUMAN                                                                                                                           |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/dna-ligase-iv-antibody-peptide-elisa-immunohistochemistry-western-blot-elisa/329674>