

DNA Ligase IV Rabbit pAb

CatalogNo: YT1367

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse

Applications

- WB, IHC, IF, ELISA

MW

- 103kD (Observed)

Isotype

- IgG

Recommended Dilution Ratios

WB 1:500-1:2000

IHC 1:100-1:300

IF 1:200-1:1000

ELISA 1:20000

Not yet tested in other applications.

Storage

Storage*

-15°C to -25°C/1 year (Do not lower than -25°C)

Formulation

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Basic Information

Clonality

Polyclonal

Immunogen Information

Immunogen

The antiserum was produced against synthesized peptide derived from human DNL4. AA range: 591-640

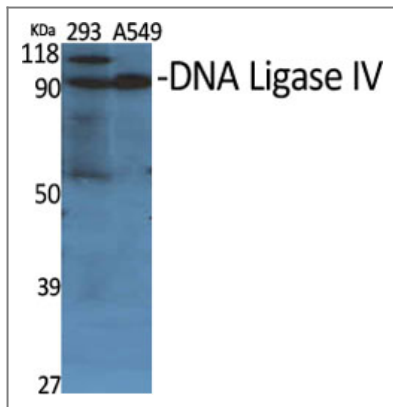
Specificity

DNA Ligase IV Polyclonal Antibody detects endogenous levels of DNA Ligase IV protein.

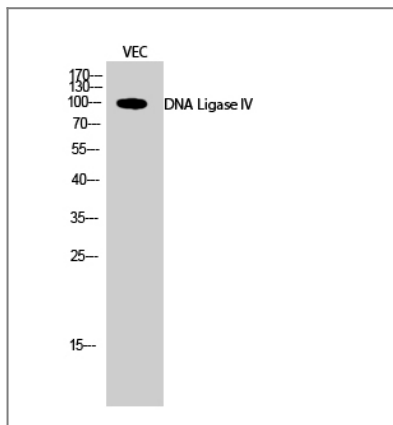
| Target Information

Gene name	LIG4		
Protein Name	DNA ligase 4		
	Organism	Gene ID	UniProt ID
	Human	3981 ;	P49917 ;
	Mouse		Q8BTF7 ;
Cellular Localization	Nucleus .		
Tissue specificity	Testis, thymus, prostate and heart.		
Function	<p>Catalytic activity:ATP + (deoxyribonucleotide)(n) + (deoxyribonucleotide)(m) = AMP + diphosphate + (deoxyribonucleotide)(n+m).,cofactor:Magnesium.,Disease:Defects in LIG4 are a cause of severe combined immunodeficiency autosomal recessive T-cell-negative/B-cell-negative/NK-cell-positive with sensitivity to ionizing radiation (RSSCID) [MIM:602450]. SCID refers to a genetically and clinically heterogeneous group of rare congenital disorders characterized by impairment of both humoral and cell-mediated immunity, leukopenia, and low or absent antibody levels. Patients with SCID present in infancy with recurrent, persistent infections by opportunistic organisms. The common characteristic of all types of SCID is absence of T-cell-mediated cellular immunity due to a defect in T-cell development. Individuals affected by RS-SCID show defects in the DNA repair machinery necessary for coding joint formation and the completion of V(D)J recombination. A subset of cells from such patients show increased radiosensitivity.,Disease:Defects in LIG4 are the cause of LIG4 syndrome [MIM:606593]. This disease is characterized by immunodeficiency and developmental and growth delay. Patients display unusual facial features, microcephaly, growth and/or developmental delay, pancytopenia, and various skin abnormalities.,Function: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.,online information:DNA ligase entry,online information:LIG4 mutation db,similarity:Belongs to the ATP-dependent DNA ligase family.,similarity:Contains 2 BRCT domains.,subunit:Binds to XRCC4. The LIG4-XRCC4 complex has probably a 1:2 stoichiometry. The LIG4-XRCC4 heteromer associates in a DNA-dependent manner with the DNA-dependent protein kinase complex DNA-PK, formed by the Ku p70/p86 dimer (G22P1/G22P2) and PRKDC.,tissue specificity:Testis, thymus, prostate and heart.,</p>		

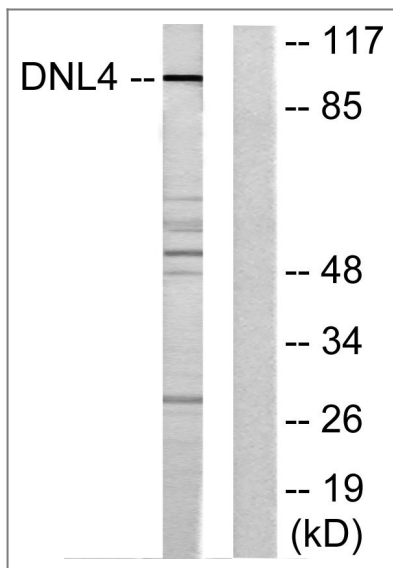
| Validation Data



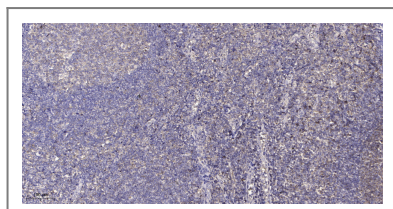
Western Blot analysis of various cells using DNA Ligase IV Polyclonal Antibody diluted at 1:500



Western Blot analysis of VEC cells using DNA Ligase IV Polyclonal Antibody diluted at 1:500



Western blot analysis of lysates from Jurkat cells, using DNL4 Antibody. The lane on the right is blocked with the synthesized peptide.



Immunohistochemical analysis of paraffin-embedded human tonsil. 1, Antibody was diluted at 1:200(4° overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 45min).

Contact information

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Please scan the QR code
to access additional
product information:
DNA Ligase IV
Rabbit pAb

For Research Use Only. Not for Use in Diagnostic Procedures.

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