DNA Ligase IV Rabbit pAb

CatalogNo: YT1367

Key Features

Host Species	Reactivity	Applications
• Rabbit	• Human,Mouse	• WB,IHC,IF,ELISA

MW	Isotype
• 103kD (Observed)	• IgG

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.

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.

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 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.,

Validation Data

Contact information

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Please scan the QR code to access additional product information:
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