Best Tools for immunology Research

DNA Ligase IV Polyclonal Antibody

Catalog No :	YT1367
Reactivity :	Human;Mouse
Applications :	WB;IHC;IF;ELISA
Target :	DNA Ligase IV
Fields :	>>Non-homologous end-joining
Gene Name :	LIG4
Protein Name :	DNA ligase 4
Human Gene Id :	3981
Human Swiss Prot No :	P49917
Mouse Swiss Prot No :	Q8BTF7
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.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Polyclonal, Rabbit,IgG
Dilution :	WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:20000. Not yet tested in other applications.
Purification :	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Concentration :	1 mg/ml

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

Observed Band : 103kD

Cell Pathway : Non-homologous end-joining;

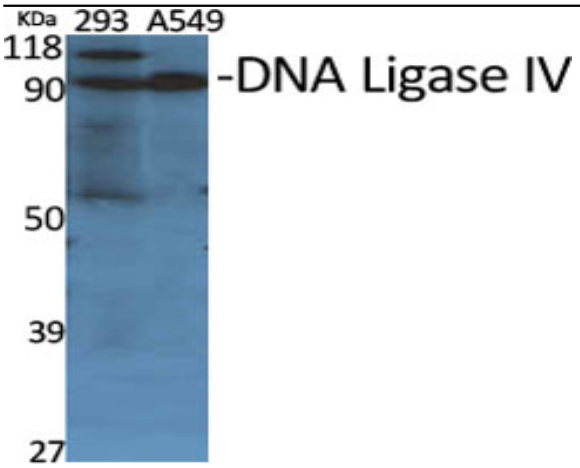
Background : The protein encoded by this gene is a DNA ligase that joins single-strand breaks in a double-stranded polydeoxynucleotide in an ATP-dependent reaction. This protein is essential for V(D)J recombination and DNA double-strand break (DSB) repair through nonhomologous end joining (NHEJ). This 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. [provided by RefSeq, Jul 2008],

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

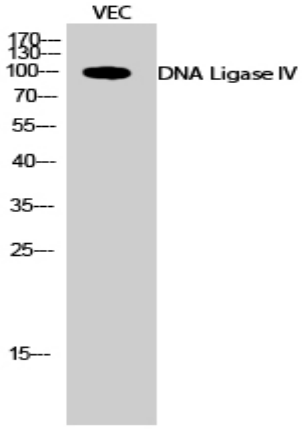
Subcellular Location : Nucleus .

Expression : Testis, thymus, prostate and heart.

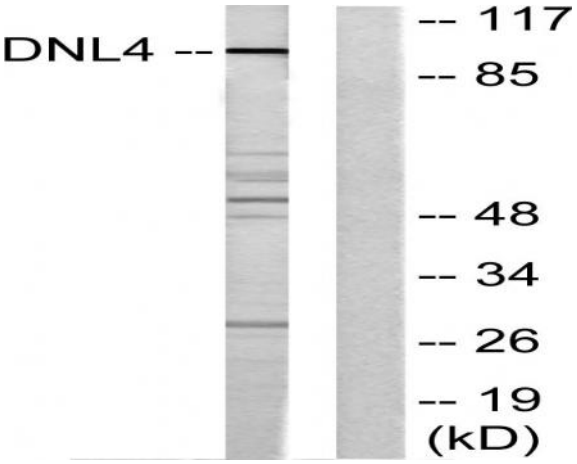
Products Images



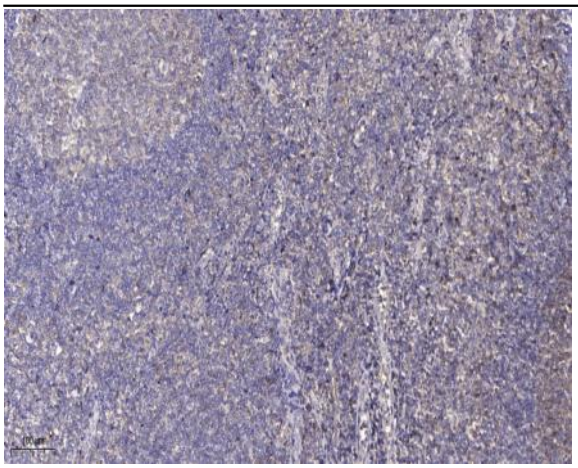
Western Blot analysis of various cells using DNA Ligase IV Polyclonal Antibody diluted at 1:500



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).