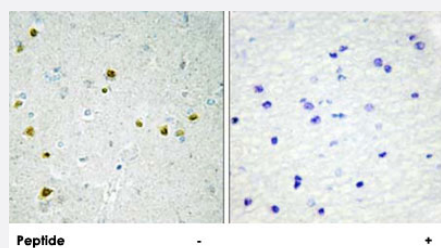


LIG4 polyclonal antibody

Catalog # PAB17316 Size 100 ug

Applications



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunohistochemistry analysis of paraffin-embedded human brain tissue using LIG4 polyclonal antibody (Cat # PAB17316).

Peptide "+" means "with peptide blocking".

Specification

Product Description Rabbit polyclonal antibody raised against synthetic peptide of LIG4.

Immunogen A synthetic peptide corresponding to internal of human LIG4.

Host Rabbit

Reactivity Human

Specificity This antibody detects endogenous levels of total LIG4 protein.

Form Liquid

Recommend Usage Immunohistochemistry (1:50-1:100)
ELISA (1:20000)
The optimal working dilution should be determined by the end user.

Storage Buffer In PBS, pH 7.4 (150mM NaCl, 0.02% sodium azide, 50% glycerol)

Storage Instruction Store at -20°C.
Aliquot to avoid repeated freezing and thawing.

Note This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Applications

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunohistochemistry analysis of paraffin-embedded human brain tissue using LIG4 polyclonal antibody (Cat # PAB17316).
Peptide "+" means "with peptide blocking".

Gene Info — LIG4

Entrez GeneID [3981](#)

Protein Accession# [P49917](#)

Gene Name LIG4

Gene Alias -

Gene Description ligase IV, DNA, ATP-dependent

Omim ID [254500](#) [601837](#) [606593](#)

Gene Ontology [Hyperlink](#)

Gene Summary 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]

Other Designations DNA joinase|DNA ligase IV|DNA repair enzyme|polydeoxyribonucleotide synthase [ATP] 4|polynucleotide ligase|sealase

Publication Reference

- [The DNA sequence and analysis of human chromosome 13.](#)

Dunham A, Matthews LH, Burton J, Ashurst JL, Howe KL, Ashcroft KJ, Beare DM, Burford DC, Hunt SE, Griffiths-Jones S, Jones MC, Keenan SJ, Oliver K, Scott CE, Ainscough R, Almeida JP, Ambrose KD, Andrews DT, Ashwell RI, Babbage AK, Bagguley CL, Bailey J, Bannerjee R, Barlow KF, Bates K, Beasley H, Bird CP, Bray-Allen S, Brown AJ, Brown JY, Burrill W, Carder C, Carter NP, Chapman JC, Clamp ME, Clark SY, Clarke G, Clee CM, Clegg SC, Cobley V, Collins JE, Corby N, Coville GJ, Deloukas P, Dhami P, Du

Nature 2004 Apr; 428(6982):522.

- [DNA ligase IV from HeLa cell nuclei.](#)

Robins P, Lindahl T.

The Journal of Biological Chemistry 1996 Sep; 271(39):24257.

Application: WB-Re, Recombinant protein

- [Molecular cloning and expression of human cDNAs encoding a novel DNA ligase IV and DNA ligase III, an enzyme active in DNA repair and recombination.](#)

Wei YF, Robins P, Carter K, Caldecott K, Pappin DJ, Yu GL, Wang RP, Shell BK, Nash RA, Schar P, et al..

Molecular and Cellular Biology 1995 Jun; 15(6):3206.

Pathway

- [Non-homologous end-joining](#)

Disease

- [Adenocarcinoma](#)
- [Ascariasis](#)
- [Asthma](#)
- [Ataxia telangiectasia](#)
- [Brain Neoplasms](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Carcinoma](#)
- [Colorectal Neoplasms](#)

- [DNA Damage](#)
- [Esophageal Neoplasms](#)
- [Genetic Predisposition to Disease](#)
- [Genomic Instability](#)
- [Glioma](#)
- [Head and Neck Neoplasms](#)
- [Hematologic Diseases](#)
- [Hodgkin Disease](#)
- [Immunologic Deficiency Syndromes](#)
- [Kidney Failure](#)
- [Lung Neoplasms](#)
- [Lymphoma](#)
- [Lymphoproliferative Disorders](#)
- [Malignant melanoma](#)
- [Melanoma](#)
- [Meningeal Neoplasms](#)
- [Meningioma](#)
- [Mouth Neoplasms](#)
- [Multiple Myeloma](#)
- [Multiple Sclerosis](#)
- [Neoplasm Invasiveness](#)
- [Neoplasms](#)
- [Neuroma](#)
- [Occupational Diseases](#)
- [Ovarian cancer](#)
- [Ovarian Neoplasms](#)

- [Pancreatic cancer](#)
- [Pancreatic Neoplasms](#)
- [Precancerous Conditions](#)
- [Prostate cancer](#)
- [Prostatic Neoplasms](#)
- [Pulmonary Disease](#)
- [Radiodermatitis](#)
- [Severe Combined Immunodeficiency](#)
- [Skin Neoplasms](#)
- [Stomach Neoplasms](#)
- [Thyroid Neoplasms](#)
- [Urinary Bladder Neoplasms](#)
- [Uterine Cervical Neoplasms](#)
- [Waldenstrom Macroglobulinemia](#)
- [Werner syndrome](#)