Anti-DNA Ligase IV Antibody [JM64-32]

ET1705-77

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P, IF-Cell
Molecular Wt:	Predicted band size: 104 kDa
Clone number:	JM64-32

Description: The X-ray repair cross-complementing protein XRCC4 and DNA Ligase IV are essential for repairing double-strand breaks in DNA. These stories form a critical complex composed of two molecules of each protein that preferentially bind DNA with nicks or broken ends. As an obligatory accessory molecule, XRCC4 binds to DNA Ligase IV and enhances its joining activity. The XRCC4 / DNA Ligase IV complex is also involved in V (D) J recombination. V (D) (in) a pair of high incidence of apoptosis in the development nervous system and a block in B and T cell maturation.

Immunogen: Recombinant protein within Human DNA Ligase IV aa 484-705 / 911.

Positive control: HepG2 cell lysate, Hela cell lysate, Jurkat cell lysate, human colon carcinoma tissue, human placenta tissue.

Subcellular location: Nucleus.

Database links: SwissProt: P49917 Human

Recommended Dilutions:

WB	1:500-1:2,000
IHC-P	1:50-1:200
IF-Cell	1:10-1:50

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

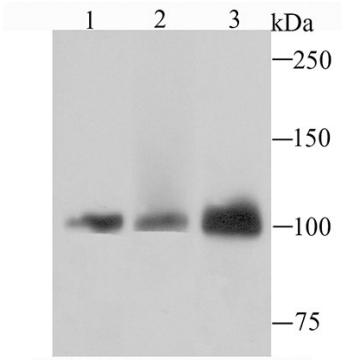

Fig1: Western blot analysis of DNA Ligase IV on different lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (ET1705-77, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.
Positive control:
Lane 1: HepG2 cell lysate
Lane 2: Hela cell lysate
Lane 3: Jurkat cell lysate

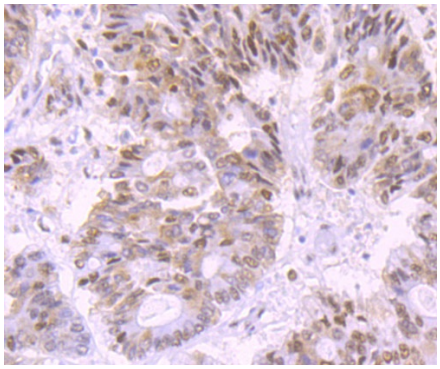

Fig2: Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue using anti-DNA Ligase IV antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes.The tissues were blocked in 1% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1705-77, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

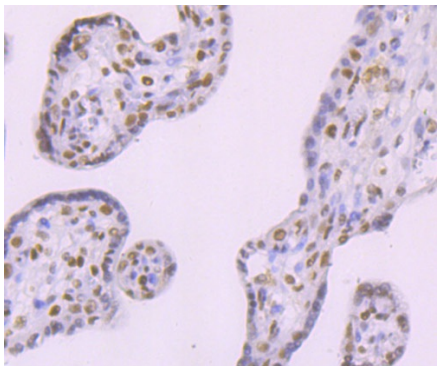

Fig3: Immunohistochemical analysis of paraffin-embedded human placenta tissue using anti-DNA Ligase IV antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes.The tissues were blocked in 1% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1705-77, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Rasmussen RD et al. Enhanced efficacy of combined HDAC and PARP targeting in glioblastoma. Mol Oncol 10(5):751-63 (2016).
2. Morgenroth A et al. Hedgehog signaling sensitizes glioma stem cells to endogenous nano-irradiation. Oncotarget 5:5483-93 (2014).