bsm-54131R **[Primary Antibody]**

DNA Ligase IV Recombinant Rabbit mAb

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DATASHEET

Host: Rabbit
Isotype: IgG
Clonality: Recombinant
CloneNo.: 2D9
GeneID: 3981
SWISS: P49917
Target: DNA Ligase IV
Purification: affinity purified by Protein A
Concentration: 1mg/ml
Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: The X-ray repair cross-complementing protein XRCC4 and DNA Ligase IV are essential for repairing double-strand breaks in DNA. These proteins form a critical complex consisting of two molecules of each protein that preferentially bind DNA with nicks or broken ends. As an obligate 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)J recombination occurs in normal development of the adaptive immune system and involves the formation of a double-strand break intermediate. Deletions of either DNA Ligase IV or XRCC4 inhibit the completion of V(D)J recombination, resulting in a high incidence of apoptosis in the developing nervous system and a block in B and T cell maturation.

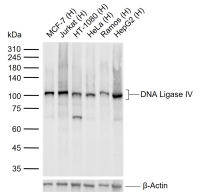
Applications: **WB** (1:500-2000)
IHC-P (1:50-200)
IHC-F (1:400-800)
IF (1:100-500)
ICC/IF (1:10-50)

Reactivity: Human

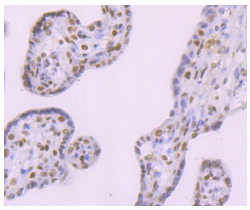
Predicted MW.: 104 kDa

Subcellular Location: Nucleus

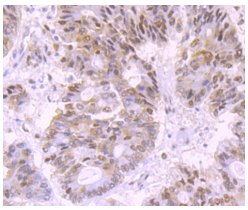
VALIDATION IMAGES



Sample: Lane 1: Human MCF-7 cell lysates Lane 2: Human Jurkat cell lysates Lane 3: Human HT-1080 cell lysates Lane 4: Human HeLa cell lysates Lane 5: Human Ramos cell lysates Lane 6: Human HepG2 cell lysates Primary: Anti-DNA Ligase IV (bsm-54131R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 104 kDa Observed band size: 104 kDa



Paraformaldehyde-fixed, paraffin embedded (human placenta tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (DNA Ligase IV) Monoclonal Antibody, Unconjugated (bsm-54131R) at 1:50 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Paraformaldehyde-fixed, paraffin embedded (human colon cancer); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (DNA Ligase IV) Monoclonal Antibody, Unconjugated (bsm-54131R) at 1:50 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.