bs-8510R **[Primary Antibody]**

XRCC4 Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 7518 **SWISS:** Q13426

Target: XRCC4

Immunogen: KLH conjugated synthetic peptide derived from human XRCC4: 151-260/336.

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 (XRCC) proteins are responsible for efficiently repairing and maintaining genetic stability following DNA base damage. These genes share sequence similarity with the yeast DNA repair protein Rad51. XRCC1 is a protein that facilitates the DNA base excision repair pathway by interacting with DNA ligase III and DNA polymerase to repair DNA single-strand breaks. XRCC2 and XRCC3 are both involved in maintaining chromosome stability during cell division. XRCC2 is required for efficient repair of DNA double-strand breaks by homologous recombination between sister chromatids, and XRCC3 interacts directly with Rad51 to cooperate with Rad51 during recombinational repair. XRCC4 is an accessory factor of DNA ligase IV that preferentially binds DNA with nicks or broken ends. XRCC4 binds to DNA ligase IV and enhances its joining activity, and it is also involved in V(D)J recombination. Any defect in one of the known components of the DNA repair/V(D)J recombination machinery (Ku-70, Ku-80, DNA-PKCS, XRCC4 and DNA ligase IV) leads to abortion of the V(D)J rearrangement process and early block in both T and B cell maturation.

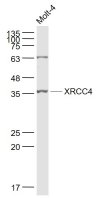
Applications: **WB** (1:500-2000)

Reactivity: Human (predicted: Mouse, Rat, Rabbit, Pig, Cow, Dog, Horse)

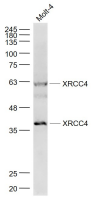
Predicted MW.: 38/60 kDa

Subcellular Location: Nucleus

VALIDATION IMAGES



Sample: MOLT-4(Human) Cell Lysate at 30 ug Primary: Anti- XRCC4 (bs-8510R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 38/60 kD Observed band size: 36 kD



Sample: MOLT-4(Human) Cell Lysate at 30 ug Primary: Anti- XRCC4 (bs-8510R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 38/60 kD Observed band size: 38/60 kD

SELECTED CITATIONS

- **[IF=2.531]** Talibova, Gunel. et al. Increased double-strand breaks in aged mouse male germ cells may result from changed expression of the genes essential for homologous recombination or nonhomologous end joining repair. HISTOCHEM CELL BIOL. 2022 Oct;:1-21 IHC ;Mouse. 36241856
- **[IF=3.2]** Talibova Gunel. et al. The DNA double-strand break repair proteins γH2AX, RAD51, BRCA1, RPA70, KU80, and

XRCC4 exhibit follicle-specific expression differences in the postnatal mouse ovaries from early to older ages. J ASSIST REPROD GEN. 2024 Jul;:1-21 IHC ;Mouse. 39023827