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XRCC4 Recombinant Mouse mAb

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Catalog # AP94228

Product Information

Application	WB
Host	Rabbit
Clonality	Recombinant
Physical State	Liquid
Isotype	IgG2B/lambda
Purity	affinity purified by Protein G
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus.
SIMILARITY	Belongs to the XRCC4 family.
SUBUNIT	Homodimer and homotetramer in solution. The homodimer associates with LIG4, and the LIG4-XRCC4 complex associates in a DNA-dependent manner with the DNA-PK complex formed by the Ku p70/p86 dimer (XRCC6/XRCC5) and PRKDC. Seems to interact directly with PRKDC but not with the Ku p70/86 dimer. Interacts with XLF/Cernunnos. Interacts with APTX and APLF.
Post-translational modifications	Phosphorylated by PRKDC. The phosphorylation seems not to be necessary for binding to DNA. Phosphorylation by CK2 promotes interaction with APTX. Monoubiquitinated. Sumoylation at Lys-210 is required for nuclear localization and recombination efficiency. Has no effect on ubiquitination.
DISEASE	The disease is caused by mutations affecting the gene represented in this entry. Disease descriptionA disease characterized by short stature and microcephaly apparent at birth, progressive post-natal growth failure, and endocrine dysfunction. In affected adults endocrine features include hypergonadotropic hypogonadism, multinodular goiter, and diabetes mellitus. Variable features observed in some patients are progressive ataxia, and lymphopenia or borderline leukopenia.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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.

Additional Information

Target/Specificity	Widely expressed.
Dilution	WB=1:500-1:1000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Background

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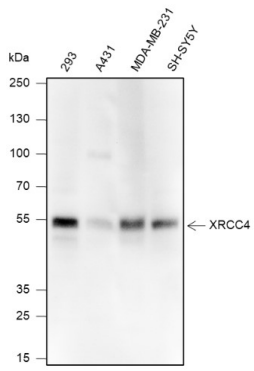
Images



Blocking buffer: 5% NFDM/TBST Primary ab dilution: 1:1000 Primary ab incubation condition: room temperature 2h Secondary ab: Goat Anti-Mouse IgG H&L (HRP) Lysate: 293, A431, MDA-MB-231, SH-SY5Y Protein loading quantity: 20 μg Exposure time: 30 s Predicted MW: 55 kDa Observed MW: 55 kDa