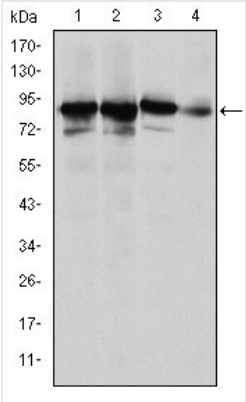
XRCC5 Antibody – Mouse

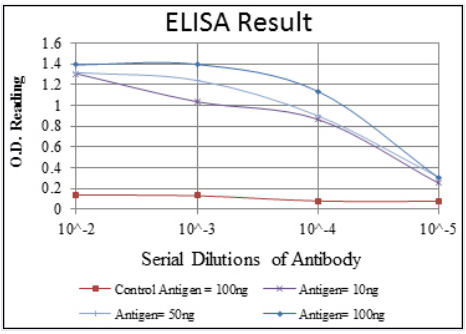
PRODUCT OVERVIEW

Product Name	XRCC5, Antibody
Full Product Name	XRCC5 Antibody
Product Gene Name	anti-XRCC5 antibody
Product Synonym Names	KU80; KUB2; Ku86; NFIV; KARP1; KARP-1
Isotype	IgG1
Clone Number	5C5
Host	Mouse
Species Reactivity	Human, Mouse
Form/Format	Ascitic fluid containing 0.03% sodium azide.
Preparation and Storage	Store at 4 degree C, for long term storage, store at-20 degree C.
Molecular Weight	86kDa
OMIM	194364
3D Structure	ModBase 3D Structure for P13010
Immunogen	Purified recombinant fragment of human XRCC5 expressed in E. Coli.
Product Categories/Family for anti-XRCC5 antibody	Autophagy antibody; Cancer; Cardiovascular; Cell Biology; Epigenetics & Nuclear Signaling; Developmental Biologys; Immunology; Drug Discovery Products; Metabolism; Neuroscience; Signal Transduction; Stem Cells
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-XRCC5 antibody	Western Blot (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Flow Cytometry (FC/FACS), ELISA (EIA)
Application Notes for anti-XRCC5 antibody	WB: 1:500-1:2000 IHC: 1:200-1:1000 IF: 1:200-1:1000 FC: 1:200-1:400 ELISA: 1:10000
Related Product Information for anti-XRCC5 antibody	The protein encoded by this gene is the 80-kilodalton subunit of the Ku heterodimer protein which is also known as ATP-dependant DNA helicase II or DNA repair protein XRCC5. Ku is the DNA-binding component of the DNA-dependent protein kinase, and it functions together with the DNA ligase IV-XRCC4 complex in the repair of DNA double-strand break by non-homologous end joining and the completion of V(D)J recombination events. This gene functionally complements Chinese hamster xrs-6, a mutant defective in DNA double-strand break repair and in ability to undergo V(D)J recombination.
Other Notes	Small volumes of anti-XRCC5 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for XRCC5 purchase	MBS850135 is an antibody targeting XRCC5. Also known as XRCC5 Antibody. Reactive in Human, Mouse. Host: Mouse.

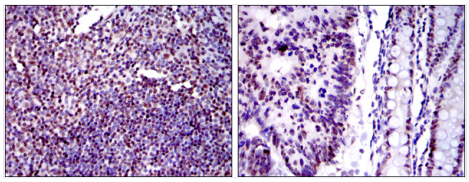


Western Blot (WB) of anti-XRCC5 antibody

Figure 1: Western blot analysis using XRCC5 mouse mAb against Hela (1), MCF-7 (2), A549 (3) and NIH/3T3 (4) cell lysate.



Testing Data of anti-XRCC5 antibody



Immunohistochemistry (IHC) of anti-XRCC5 antibody

Figure 2: Immunohistochemical analysis of paraffin-embedded human tonsil tissues (left) and human colon cancer tissues (right) using XRCC5 mouse mAb with DAB staining.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for XRCC5. It may not necessarily be applicable to this product.

NCBI GI #	10863945
NCBI GeneID	7520
NCBI Accession #	NP_066964.1
UniProt Primary Accession #	P13010
UniProt Secondary Accession #	Q0Z7V0; Q4VBQ5; Q53HH7; Q7M4N0; Q9UCQ0; Q9UCQ1; A8K3X5
UniProt Related Accession #	P13010
GenBank Nucleotide #	NM_021141.3
NCBI Official Full Name	X-ray repair cross-complementing protein 5
NCBI Official Synonym Full Names	X-ray repair cross complementing 5
NCBI Official Symbol	XRCC5
NCBI Official Synonym Symbols	KU80; KUB2; Ku86; NFIV; KARP1; KARP-1
UniProt Protein Name	X-ray repair cross-complementing protein 5
UniProt Synonym Protein Names	86 kDa subunit of Ku antigen; ATP-dependent DNA helicase 2 subunit 2; ATP-dependent DNA helicase II 80 kDa subunit; CTC box-binding factor 85 kDa subunit; CTC85; CTCBF; DNA repair protein XRCC5; Ku80; Ku86; Lupus Ku autoantigen protein p86; Nuclear factor IV; Thyroid-lupus autoantigen; TLAA; X-ray repair complementing defective repair in Chinese hamster cells 5 (double-strand-break rejoining)
UniProt Gene Name	XRCC5
UniProt Synonym Gene Names	G22P2; CTC85; CTCBF; TLAA

NCBI Protein Information	X-ray repair cross-complementing protein 5
NCBI Summary for XRCC5	The protein encoded by this gene is the 80-kilodalton subunit of the Ku heterodimer protein which is also known as ATP-dependant DNA helicase II or DNA repair protein XRCC5. Ku is the DNA-binding component of the DNA-dependent protein kinase, and it functions together with the DNA ligase IV-XRCC4 complex in the repair of DNA double-strand break by non-homologous end joining and the completion of V(D)J recombination events. This gene functionally complements Chinese hamster xrs-6, a mutant defective in DNA double-strand break repair and in ability to undergo V(D)J recombination. A rare microsatellite polymorphism in this gene is associated with cancer in patients of varying radiosensitivity. [provided by RefSeq, Jul 2008]
UniProt Comments for XRCC5	Single-stranded DNA-dependent ATP-dependent helicase. Has a role in chromosome translocation. The DNA helicase II complex binds preferentially to fork-like ends of double-stranded DNA in a cell cycle-dependent manner. It works in the 3'-5' direction. Binding to DNA may be mediated by XRCC6. Involved in DNA non-homologous end joining (NHEJ) required for double-strand break repair and V(D)J recombination. The XRCC5/6 dimer acts as regulatory subunit of the DNA-dependent protein kinase complex DNA-PK by increasing the affinity of the catalytic subunit PRKDC to DNA by 100-fold. The XRCC5/6 dimer is probably involved in stabilizing broken DNA ends and bringing them together (PubMed:12145306, PubMed:20383123, PubMed:7957065, PubMed:8621488). The assembly of the DNA-PK complex to DNA ends is required for the NHEJ ligation step. In association with NAA15, the XRCC5/6 dimer binds to the osteocalcin promoter and activates osteocalcin expression (PubMed:20383123). The XRCC5/6 dimer probably also acts as a 5'-deoxyribose-5-phosphate lyase (5'-dRP lyase), by catalyzing the beta-elimination of the 5' deoxyribose-5-phosphate at an abasic site near double-strand breaks. XRCC5 probably acts as the catalytic subunit of 5'-dRP activity, and allows to 'clean' the termini of abasic sites, a class of nucleotide damage commonly associated with strand breaks, before such broken ends can be joined. The XRCC5/6 dimer together with APEX1 acts as a negative regulator of transcription (PubMed:8621488). Plays a role in the regulation of DNA virus-mediated innate immune response by assembling into the HDP-RNP complex, a complex that serves as a platform for IRF3 phosphorylation and subsequent innate immune response activation through the cGAS-STING pathway.
Research Articles on XRCC5	**1.** these results suggest that polymorphisms of XRCC5 play an important role in astrocytoma prognosis in the Chinese Han population which could be used in the determination of astrocytoma prognosis in clinical researches
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