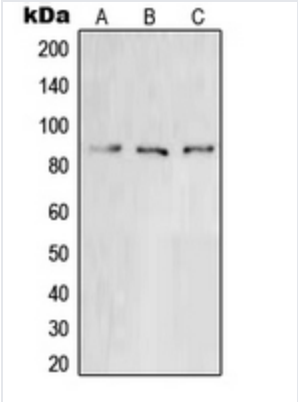
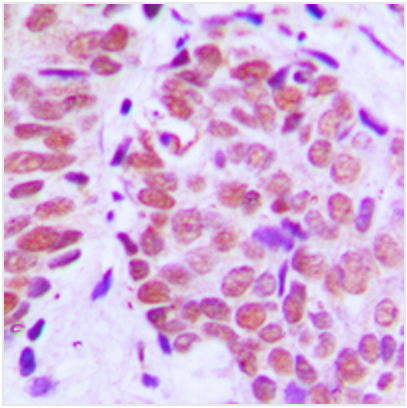
KU80 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Ku80, Polyclonal Antibody
Full Product Name	Rabbit anti-Ku80 Antibody
Product Gene Name	anti-Ku80 antibody
Product Synonym Names	G22P2; X-ray repair cross-complementing protein 5; 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)
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Monkey
Form/Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Purity/Purification	The antibody was purified by immunogen affinity chromatography.
Concentration	1mg/mL (lot specific)
Preparation and Storage	Store at -20 degree C. Avoid repeated freeze/thaw cycles.
Molecular Weight	82,705 Da
Chromosome Location	Chromosome: 2; NC_000002.11 (216974020..217071016). Location: 2q35
OMIM	194364
3D Structure	ModBase 3D Structure for P13010
Immunogen	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human Ku80. The exact sequence is proprietary.
Product Categories/Family for anti-Ku80 antibody	Primary antibodies
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-Ku80 antibody	Western Blot (WB), Immunohistochemistry (IHC)
Application Notes for anti-Ku80 antibody	WB: 1:500-1:1000 IHC: 1:100-1:200
Related Product Information for anti-Ku80 antibody	MBS4506406 is an antibody targeting Ku80. Also known as Rabbit anti-Ku80 Antibody. Reactive in Human, Monkey. Host: Rabbit.
Other Notes	Small volumes of anti-Ku80 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.



Western Blot (WB) of anti-Ku80 antibody
Western blot analysis of Ku80 expression in A549 (A), HeLa (B), Raji (C) whole cell lysates.



Immunohistochemistry (IHC) of anti-Ku80 antibody
Immunohistochemical analysis of Ku80 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Ku80. 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 complementing defective repair in Chinese hamster cells 5 (double-strand-break rejoining)
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)
Protein Family	ATP-dependent DNA helicase
UniProt Gene Name	XRCC5
UniProt Synonym Gene Names	G22P2; CTC85; CTCBF; TLAA
UniProt Entry Name	XRCC5_HUMAN
NCBI Protein Information	X-ray repair cross-complementing protein 5; TLAA; CTC85; CTCBF; nuclear factor IV; Ku autoantigen, 80kDa; DNA repair protein XRCC5; thyroid-lupus autoantigen; 86 kDa subunit of Ku antigen; lupus Ku autoantigen protein p86; Ku86 autoantigen related protein

NCBI Summary for Ku80	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 Ku80	Ku80: the 80-kilodalton subunit of the Ku complex, also known as ATP-dependant DNA helicase II. A single stranded DNA-dependent ATP-dependent helicase. 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. 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 p70. Protein type: RNA-binding; DNA-binding; EC 3.6.4.-; Nuclear receptor co-regulator; Helicase; Nucleolus; EC 3.6.1.- Chromosomal Location of Human Ortholog: 2q35 Cellular Component: nucleoplasm; nuclear telomere cap complex; membrane; nuclear chromosome, telomeric region; nucleolus; plasma membrane; nucleus; cytosol Molecular Function: ATP-dependent DNA helicase activity; protein C-terminus binding; protein binding; DNA binding; ubiquitin protein ligase binding; double-stranded DNA binding; telomeric DNA binding; damaged DNA binding; double-stranded telomeric DNA binding; 5'-deoxyribose-5-phosphate lyase activity; ATP binding Biological Process: response to drug; cell proliferation; positive regulation of neurogenesis; transcription, DNA-dependent; viral reproduction; double-strand break repair; positive regulation of interferon type I production; innate immune response; brain development; DNA repair; negative regulation of transcription, DNA-dependent; telomere maintenance; double-strand break repair via nonhomologous end joining; DNA duplex unwinding; DNA recombination
Research Articles on Ku80	**1.** Two (XRCC5 and TOP2A) of seven DNA repair and replication proteins studied were prognostic for melanoma.
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