

Summary

Production Name	Ku-86 Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,IHC
Reactivity	Human,Rat,Mouse

Performance

Conjugation	Unconjugated
Modification	Unmodified
lsotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw
	cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	XRCC5
Alternative Names	XRCC5; 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 pr
Gene ID	7520.0
SwissProt ID	P13010.The antiserum was produced against synthesized peptide derived from human
	XRCC5. AA range:441-490

Application

Dilution Ratio	WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:40000
Molecular Weight	80kD



Background

The protein encoded by this gene is the 80-kilodalton subunit of the Ku heterodimer protein which is also known as ATPdependant 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], developmental stage: Expression increases during promyelocyte differentiation.,disease:Individuals with systemic lupus erythematosus (SLE) and related disorders produce extremely large amounts of autoantibodies to p70 and p86., domain: The EEXXXDDL motif is required for the interaction with catalytic subunit PRKDC and its recruitment to sites of DNA damage., function: 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 p70. Involved in DNA nonhomologous end joining (NHEJ) required for double-strand break repair and V(D)J recombination. The Ku p70/p86 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 Ku p70/p86 dimer is probably involved in stabilizing broken DNA ends and bringing them together. The assembly of the DNA-PK complex to DNA ends is required for the NHEJ ligation step. In association with NARG1, the Ku p70/p86 dimer binds to the osteocalcin promoter and activates osteocalcin expression.,induction: In osteoblasts, by FGF2.,PTM: Phosphorylated on serine residues. Phosphorylation by PRKDC may enhance helicase activity., PTM:Sumoylated., similarity:Belongs to the ku80 family,,similarity:Contains 1 Ku domain.,subunit:Heterodimer of a 70 kDa and a 80 kDa subunit. The dimer associates in a DNA-dependent manner with PRKDC to form the DNA-dependent protein kinase complex DNA-PK, and with the LIG4-XRCC4 complex. The dimer also associates with NARG1, and this complex displays DNA binding activity towards the osteocalcin FGF response element (OCFRE). In addition, the 80 kDa subunit binds to the osteoblast-specific transcription factors MSX2 and RUNX2. Interacts with ELF3. May interact with APLF.,

Research Area

Non-homologous end-joining;

Image Data

Product Name: Ku-86 Rabbit Polyclonal Antibody Catalog #: APRab13158





Western blot analysis of lysates from Jurkat cells, using XRCC5 Antibody. The lane on the right is blocked with the













Immunohistochemical analysis of paraffin-embedded Human brain. Antibody was diluted at 1:100 (4°,overnight) . Highpressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negetive contrl (right) obtaned from antibody was pre-absorbed by immunogen peptide.

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