



## Rabbit Anti-Ku-70 antibody

SL2295R

<b>Product Name:</b>	Ku-70
<b>Chinese Name:</b>	DNA修复酶Ku70抗体
<b>Alias:</b>	Ku70; 70 kDa subunit of Ku antigen; 70 kDa subunit of Ku antigen; ATP dependent DNA helicase 2 subunit 1; ATP dependent DNA helicase II 70 kDa subunit; CTC box binding factor 75 kDa subunit; CTC75; CTCBF; DNA repair protein XRCC6; G22P1; Ku 70; Ku autoantigen 70kDa; Ku autoantigen p70 subunit; Ku autoantigen, 70kDa; Ku p70; Ku70 DNA binding component of DNA-dependent proteinkinase complex (thyroid autoantigen 70 kDa; Kup70; Lupus Ku autoantigen protein p70; ML8; Thyroid autoantigen 70kD (Ku antigen); Thyroid autoantigen; Thyroid lupus autoantigen; Thyroid lupus autoantigen p70; TLAA; X ray repair complementing defective repair in Chinese hamster cells 6; XRCC 6; XRCC6; XRCC6 HUMAN.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,Pig,Cow,Horse,Rabbit,
<b>Applications:</b>	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	70kDa
<b>Cellular localization:</b>	The nucleus
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthetic peptide derived from human Ku-70:231-330/609
<b>Isotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. 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.

**PubMed:**[PubMed](#)

The p70/p80 autoantigen is a nuclear complex consisting of two subunits with molecular masses of approximately 70 and 80 kDa. The complex functions as a single-stranded DNA-dependent ATP-dependent helicase. The complex may be involved in the repair of nonhomologous DNA ends such as that required for double-strand break repair, transposition, and V(D)J recombination. High levels of autoantibodies to p70 and p80 have been found in some patients with systemic lupus erythematosus. [provided by RefSeq].

Ku70 heterodimerises with Ku80 to form the ATP-dependent DNA helicase II, a single stranded helicase that binds preferentially to fork-like ends of double-stranded DNA in a cell cycle-dependent manner. The heterodimer plays a role in non-homologous end-joining (NHEJ) required for double-strand break repair and V(D)J recombination. It acts as the regulatory subunit of the DNA-dependent protein kinase complex DNA-PK by increasing the affinity of the catalytic subunit (PRKDC) for DNA. The Ku70/80 heterodimer is also required for osteocalcin gene expression.

**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 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. The assembly of the DNA-PK complex to DNA ends is required for the NHEJ ligation step. Required for osteocalcin gene expression. 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. 5'-dRP lyase activity 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.

**Subunit:**

Heterodimer of a 70 kDa (XRCC6) and a 80 kDa (XRCC5) 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 NAA15, and this complex binds to the osteocalcin promoter and activates osteocalcin expression. In addition, XRCC6 interacts with the osteoblast-specific transcription factors MSX2, RUNX2 and DLX5. Interacts with ELF3. Interacts with XRCC6BP1. The XRCC5/6 dimer associates in a DNA-dependent manner with APEX1. Interacts with CLU. Binds to CDK9 isoform 2. Identified in a complex with DEAF1 and XRCC5. Interacts with DEAF1 (via the SAND domain); the interaction is direct and may be inhibited by DNA-binding.

**Subcellular Location:****Product Detail:**

Nucleus. Chromosome.

**Post-translational modifications:**

Phosphorylation by PRKDC may enhance helicase activity. Phosphorylation of Ser-51 does not affect DNA repair.

**Similarity:**

Belongs to the ku70 family.  
Contains 1 Ku domain.  
Contains 1 SAP domain.

**SWISS:**

P12956

**Gene ID:**

2547

**Database links:**

[Entrez Gene: 2547](#)Human

[Entrez Gene: 25019](#)Rat

[Omim: 152690](#)Human

[SwissProt: P12956](#)Human

[Unigene: 292493](#)Human

[Unigene: 161996](#)Rat

**Important Note:**

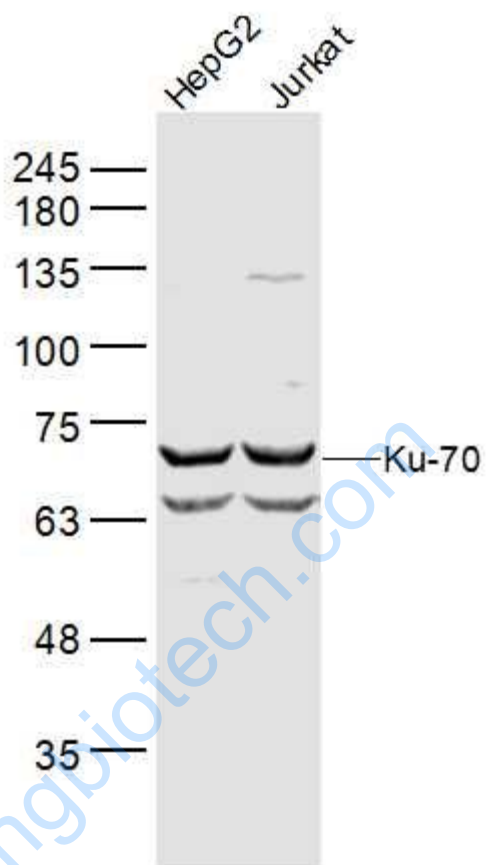
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Ku-

70是一种DNA修复蛋白,当细胞在受到辐射损伤而发生DNA双链断裂时, Ku70可迅速将其修复,从而提高细胞存活率.

Ku是一种多功能的蛋白,在许多重要的细胞生命过程中起着直接或间接的作用,如DNA双链断裂的修复,免疫球蛋白和T细胞受体V(D)J重排,免疫球蛋白构型转换, DNA复制, DNA转录的调节,同时在细胞周期的G2和M时相中起着特殊的作用.

Picture:



Sample:

HepG2(Human) Cell Lysate at 40 ug

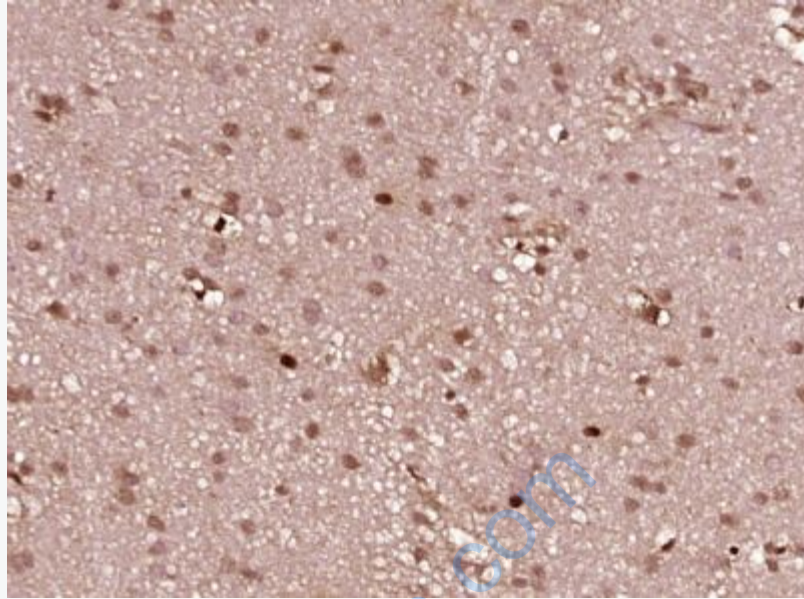
Jurkat(Human) Cell Lysate at 40 ug

Primary: Anti-Ku-70 (SL2295R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 70 kD

Observed band size: 70 kD



Paraformaldehyde-fixed, paraffin embedded (human brain glioma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Ku-70) Polyclonal Antibody, Unconjugated (SL2295R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.