

Rabbit anti-Human, Mouse Ku70 Polyclonal Antibody | anti-Ku70 antibody

Ku70 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329210	Rabbit	Human, Mouse	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

Ku70; Polyclonal Antibody; Ku70 Antibody; 5"-deoxyribose-5-phosphate lyase Ku70; 5"-dRP lyase Ku70; 70kDa subunit of Ku antigen; ATP dependent DNA helicase 2 subunit 1; ATP dependent DNA helicase II 70kDa subunit; ATP-dependent DNA helicase 2 subunit 1; ATP-dependent DNA helicase II 70kDa subunit; CTC box binding factor 75kDa subunit; CTC box-binding factor 75kDa subunit; CTC75; CTCBF; DNA repair protein XRCC6; G22P1; Ku 70; Ku autoantigen p70 subunit; Ku autoantigen; 70kDa; Ku p70; Ku70 DNA binding component of DNA-dependent protein kinase complex (thyroid autoantigen 70kDa; Kup70; Lupus Ku autoantigen protein p70; ML8; Thyroid autoantigen 70kD (Ku antigen); Thyroid autoantigen; Thyroid lupus autoantigen; Thyroid lupus autoantigen p70; Thyroid-lupus autoantigen; TLAA; X ray repair complementing defective repair in Chinese hamster cells 6; X-ray repair complementing defective repair in Chinese hamster cells 6; X-ray repair cross-complementing protein 6; XRCC 6; Xrcc6; XRCC6_HUMAN; anti-Ku70 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Ku70 antibody detects endogenous levels of total Ku70.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-Ku70 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Ku70
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Phosphorylation by PRKDC may enhance helicase activity. Phosphorylation of Ser-51 does not affect DNA repair. ADP-ribosylated by PARP3.
Subunit Structure	Heterodimer composed of XRCC5/Ku80 and XRCC6/Ku70. 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 to form the core of the non-homologous end joining (NHEJ) complex. Additional components of the NHEJ complex include NHEJ1/XLF and PAXX. 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 ATP23. The XRCC5/6 dimer associates in a DNA-dependent manner with APEX1. 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. Interacts with CLU (By similarity). Interacts with NR4A3; the DNA-dependent protein kinase complex DNA-PK phosphorylates and activates NR4A3 and prevents NR4A3 ubiquitinylation and degradation. Interacts with CYREN isoform 1 (CYREN-1) and isoform 4 (CYREN-2). Interacts (via N-terminus) with HSF1 (via N-terminus); this interaction is direct and prevents XRCC5/XRCC6 heterodimeric binding and non-homologous end joining (NHEJ) repair activities induced by ionizing radiation (IR). Part of the HDP-RNP complex composed of at least HEXIM1, PRKDC, XRCC5, XRCC6, paraspeckle proteins (SFPQ, NONO, PSPC1, RBM14, and MATR3) and NEAT1 RNA. Interacts with HMBOX1. (Microbial infection) Interacts with human T-cell leukemia virus 1/HTLV-1 protein HBZ.

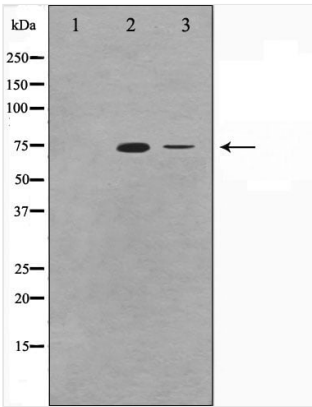
Similarity	Belongs to the ku70 family.
Subcellular Location	Nucleus. Chromosome.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

Staining HeLa by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100,then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)

Western blot analysis on HeLa and HepG2 cell lysates using Ku70 Antibody

ADDITIONAL INFORMATION

Related Product Information for anti-Ku70 antibody

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. 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. Ku70 a mini-chromosome maintenance protein, essential for the initiation of eukaryotic genome replication. Allows DNA to undergo a single round of replication per cell cycle. Required for the entry in S phase and for cell division.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4503841
NCBI GeneID	2547
NCBI Accession #	NP_001460.1
NCBI GenBank Nucleotide #	NM_001469.3
UniProt Accession #	P12956; Q6FG89; Q9UCQ2; Q9UCQ3
Molecular Weight	69,843 Da
NCBI Official Full Name	X-ray repair cross-complementing protein 6

NCBI Official Synonym Full Names	X-ray repair complementing defective repair in Chinese hamster cells 6
NCBI Official Symbol	XRCC6
NCBI Official Synonym Symbols	ML8; KU70; TLAA; CTC75; CTCBF; G22P1
NCBI Protein Information	X-ray repair cross-complementing protein 6; 5'-dRP lyase Ku70; Ku autoantigen, 70kDa; DNA repair protein XRCC6; Ku autoantigen p70 subunit; 70 kDa subunit of Ku antigen; thyroid-lupus autoantigen p70; lupus Ku autoantigen protein p70; 5'-deoxyribose-5-pho
UniProt Protein Name	X-ray repair cross-complementing protein 6
UniProt Gene Name	XRCC6
UniProt Synonym Gene Names	G22P1; 5'-dRP lyase Ku70; CTC75; CTCBF; Ku70; TLAA
UniProt Entry Name	XRCC6_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/ku70-antibody-peptide-elisa-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/329210>