ARG57831
anti-Ku 70 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes Ku 70
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	Ku 70
Species	Human
Immunogen	Synthetic peptide of Human Ku70.
Conjugation	Un-conjugated
Alternate Names	DNA repair protein XRCC6; Thyroid-lupus autoantigen; Lupus Ku autoantigen protein p70; EC 4.2.99.-; EC 3.6.4.-; ATP-dependent DNA helicase II 70 kDa subunit; X-ray repair complementing defective repair in Chinese hamster cells 6; CTC box-binding factor 75 kDa subunit; 70 kDa subunit of Ku antigen; CTC75; 5'-deoxyribose-5-phosphate lyase Ku70; KU70; TLAA; 5'-dRP lyase Ku70; CTCBF; ML8; G22P1; X-ray repair cross-complementing protein 6; ATP-dependent DNA helicase 2 subunit 1; Ku70

Application Instructions

Application table

Application	Dilution
ICC/IF	1:50 - 1:100
IHC-P	1:50 - 1:100
WB	1:500 - 1:1000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	SW480
Observed Size	~ 70 kDa

Properties

Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.3), 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol

Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

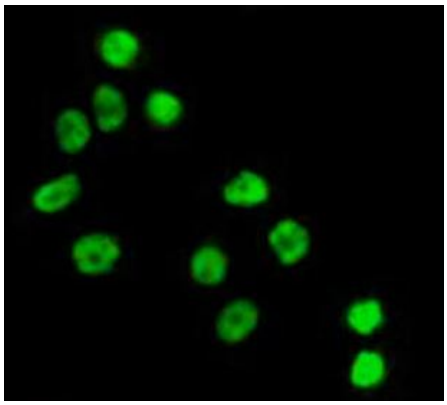
Gene Symbol	XRCC6
Gene Full Name	X-ray repair complementing defective repair in Chinese hamster cells 6
Background	The p70/p80 autoantigen is a nuclear complex consisting of two subunits with molecular masses of approximately 70 and 80 kDa. The complex functions as a single-stranded DNA-dependent ATP-dependent 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, Jul 2008]
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. [UniProt]
Calculated Mw	Isoform 1: 70 kDa Isoform 2: 65 kDa
PTM	Phosphorylation by PRKDC may enhance helicase activity. Phosphorylation of Ser-51 does not affect DNA repair. [UniProt]
Cellular Localization	Chromosome, Nucleus. [UniProt]

Images

ARG57831 anti-Ku 70 antibody WB image

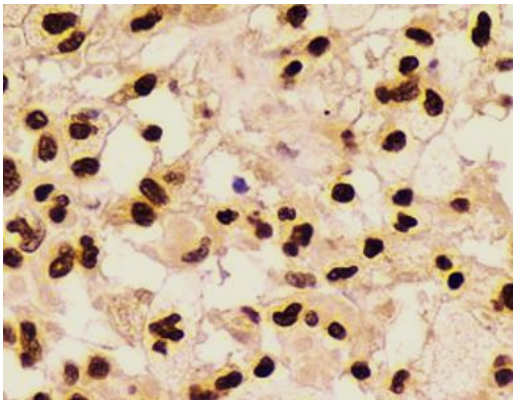
Western blot: HepG2 stained with ARG57831 anti-Ku 70 antibody.

From Wahyuni EA et al. Sci Total Environ- (2021), doi: 10.1016/j.scitotenv.2020.143597, Fig. 5. B.



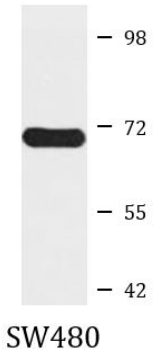
ARG57831 anti-Ku 70 antibody ICC/IF image

Immunofluorescence: HeLa cells stained with ARG57831 anti-Ku 70 antibody at 1:100 dilution.



ARG57831 anti-Ku 70 antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human brain astrocytoma stained with ARG57831 anti-Ku 70 antibody at 1:100 dilution.



ARG57831 anti-Ku 70 antibody WB image

Western blot: 25 µg of SW480 cell lysate stained with ARG57831 anti-Ku 70 antibody at 1:1000 dilution.