10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Ku (p70/p80)Mouse Monoclonal Antibody [Clone KU729]

Purified Mouse Monoclonal Antibody
Catalog # AH10371

Specification

Ku (p70/p80)Mouse Monoclonal Antibody [Clone KU729] - Product Information

Application	**IF, FC**
Primary Accession	P12956
Other Accession	P13010
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1, kappa**
Calculated MW	**70kDa & 80kDa KDa**

Ku (p70/p80)Mouse Monoclonal Antibody [Clone KU729] - Additional Information

Gene ID 2547

Other Names
Ku (p70): 70kDa subunit of Ku antigen; ATP dependent DNA helicase 2 subunit 1; ATP-dependent DNA helicase II 70kDa subunit; CTC box-binding factor 75kDa subunit; CTC75; CTCBF; DNA repair protein XRCC6; G22P1; Ku autoantigen, 70kDa; Ku70; Kup70; Lupus Ku autoantigen protein p70; ML8; Thyroid autoantigen 70kD (Ku antigen); Thyroid-lupus autoantigen (TLAA); X-ray repair cross-complementing protein 6 (XRCC6) Ku (p80): 86kDa subunit of Ku antigen; ATP dependent DNA helicase 2 subunit 2; ATP dependent DNA helicase II 86Kd subunit; ATP-dependent DNA helicase II 80kDa subunit; CTC box-binding factor 85kDa subunit; CTC85; CTCBF; DNA repair protein XRCC5; KARP1; Ku autoantigen 80kDa; Ku80; Ku86 autoantigen related protein 1; KUB2; Lupus Ku autoantigen protein p86; Nuclear factor IV (NFIV); Thyroid-lupus autoantigen (TLAA); X-ray repair cross-complementing protein 5 (XRCC5)

Target/Specificity
Nuclear extract of human HL-60 cells

Format
0.5ml at 100ug/ml with BSA and azide

Storage
Store at 2 to 8°C.Antibody is stable for 24 months.

Precautions
Ku (p70/p80)Mouse Monoclonal Antibody [Clone KU729] is for research use only and not for use in diagnostic or therapeutic procedures.

Ku (p70/p80)Mouse Monoclonal Antibody [Clone KU729] - Protein Information

Name XRCC6

Synonyms G22P1

Function
Single-stranded DNA-dependent ATP-dependent helicase that plays a key role in DNA non-homologous end joining (NHEJ) by recruiting DNA-PK to DNA (PubMed:11493912, PubMed:12145306, PubMed:20493174, PubMed:2466842, PubMed:7957065, PubMed:8621488, PubMed:9742108). Required for double-strand break repair and V(D)J recombination (PubMed:11493912, PubMed:12145306, PubMed:20493174, PubMed:2466842, PubMed:7957065, PubMed:8621488, PubMed:9742108). Also has a role in chromosome translocation (PubMed:11493912, PubMed:12145306, PubMed:20493174, PubMed:2466842, PubMed:7957065, PubMed:8621488, PubMed:9742108). Has a role in chromosome translocation (PubMed:11493912, PubMed:12145306, PubMed:20493174, PubMed:2466842, PubMed:7957065, PubMed:8621488, PubMed:9742108). The DNA helicase II complex binds preferentially to fork-like ends of double-stranded DNA in a cell cycle-dependent manner (PubMed:11493912, PubMed:12145306, PubMed:20493174, PubMed:2466842, PubMed:7957065, PubMed:8621488, PubMed:9742108). It works in the 3'-5' direction (PubMed:11493912, PubMed:12145306, PubMed:20493174, PubMed:2466842, PubMed:7957065, PubMed:8621488, PubMed:9742108). During NHEJ, the XRCC5-XRRC6 dimer performs the recognition step: it recognizes and binds to the broken ends of the DNA and protects them from further resection (PubMed:11493912, PubMed:12145306, PubMed:20493174, PubMed:2466842, PubMed:<a

href="http://www.uniprot.org/citations/7957065" target="_blank">7957065, PubMed:8621488, PubMed:9742108). Binding to DNA may be mediated by XRCC6 (PubMed:11493912, PubMed:12145306, PubMed:20493174, PubMed:2466842, PubMed:7957065, PubMed:8621488, PubMed:9742108). The XRCC5-XRRC6 dimer acts as a 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 (PubMed:11493912, PubMed:12145306, PubMed:20493174, PubMed:2466842, PubMed:7957065, PubMed:8621488, PubMed:9742108). The XRCC5-XRRC6 dimer is probably involved in stabilizing broken DNA ends and bringing them together (PubMed:11493912, PubMed:12145306, PubMed:20493174, PubMed:2466842, PubMed:7957065, PubMed:8621488, PubMed:9742108). The assembly of the DNA-PK complex to DNA ends is required for the NHEJ ligation step (PubMed:11493912, PubMed:12145306, PubMed:20493174, PubMed:2466842, PubMed:7957065, PubMed:8621488, PubMed:9742108). 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 (PubMed:20383123). 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 (PubMed:20383123). The XRCC5-XRRC6 dimer together with APEX1 acts as a negative regulator of transcription (PubMed:8621488). In association with NAA15, the XRCC5-XRRC6 dimer binds to the osteocalcin promoter and activates osteocalcin expression (PubMed:12145306). 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 (PubMed:28712728).

Cellular Location
Nucleus. Chromosome

Ku (p70/p80)Mouse Monoclonal Antibody [Clone KU729] - Protocols

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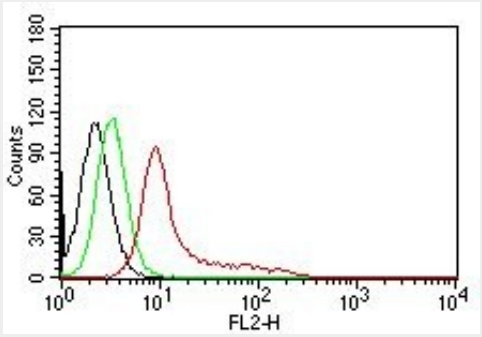
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Ku (p70/p80)Mouse Monoclonal Antibody [Clone KU729] - Images



Flow Cytometric analysis of human Ku (p70/p80) on K562 Cells. Black: Cells alone; Green: Isotype Control; Red: PE-labeled Ku MAb (KU729).