

Ku80 Rabbit mAb
Catalog # AP77316**Specification**

Ku80 Rabbit mAb - Product Information

Application	WB, IHC
Primary Accession	P13010
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	82705

Ku80 Rabbit mAb - Additional Information**Gene ID** 7520**Other Names**
XRCC5**Dilution**
WB~~1/500-1/1000
IHC~~1/50-1/100**Format**
Liquid**Ku80 Rabbit mAb - Protein Information****Name** XRCC5**Synonyms** G22P2**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](http://www.uniprot.org/citations/11493912), PubMed: [12145306](http://www.uniprot.org/citations/12145306), PubMed: [7957065](http://www.uniprot.org/citations/7957065), PubMed: [8621488](http://www.uniprot.org/citations/8621488)). Required for double-strand break repair and V(D)J recombination (PubMed: [11493912](http://www.uniprot.org/citations/11493912), PubMed: [12145306](http://www.uniprot.org/citations/12145306), PubMed: [7957065](http://www.uniprot.org/citations/7957065), PubMed: [8621488](http://www.uniprot.org/citations/8621488)). Also has a role in chromosome translocation (PubMed: [11493912](http://www.uniprot.org/citations/11493912), PubMed: [12145306](http://www.uniprot.org/citations/12145306), PubMed: [7957065](http://www.uniprot.org/citations/7957065), PubMed: [8621488](http://www.uniprot.org/citations/8621488)).

target="_blank">8621488). 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:7957065, PubMed:8621488). It works in the 3'-5' direction (PubMed:11493912, PubMed:12145306, PubMed:7957065, PubMed:8621488). During NHEJ, the XRCC5-XRCC6 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:7957065, PubMed:8621488). Binding to DNA may be mediated by XRCC6 (PubMed:11493912, PubMed:12145306, PubMed:7957065, PubMed:8621488). The XRCC5-XRCC6 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:20383123, PubMed:7957065, PubMed:8621488). The XRCC5-XRCC6 dimer is probably involved in stabilizing broken DNA ends and bringing them together (PubMed:12145306, PubMed:20383123, PubMed:7957065, PubMed:8621488). The assembly of the DNA-PK complex to DNA ends is required for the NHEJ ligation step (PubMed:12145306, PubMed:20383123, PubMed:7957065, PubMed:8621488). The XRCC5-XRCC6 dimer 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). XRCC5 probably acts as the catalytic subunit of 5'-dRP activity, and 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-XRCC6 dimer together with APEX1 acts as a negative regulator of transcription (PubMed:8621488). In association with NAA15, the XRCC5-XRCC6 dimer binds to the osteocalcin promoter and activates osteocalcin expression (PubMed:12145306). As part of the DNA-PK complex, involved in the early steps of ribosome assembly by promoting the processing of precursor rRNA into mature 18S rRNA in the small- subunit processome (PubMed:32103174). Binding to U3 small nucleolar RNA, recruits PRKDC and XRCC5/Ku86 to the small-subunit processome (PubMed:32103174). 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. Nucleus, nucleolus. Chromosome

Ku80 Rabbit mAb - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Ku80 Rabbit mAb - Images



