

产品名称: Ku80 (17A1) Rabbit Monoclonal Antibody
产品货号: AMRe13156



产品概述 (Summary)

产品名称 (Production Name)	Ku80 (17A1) Rabbit Monoclonal Antibody
描述 (Description)	Recombinant rabbit monoclonal antibody
宿主 (Host)	Rabbit
应用 (Application)	WB,IHC,FC
种属反应性 (Reactivity)	Human

产品性能 (Performance)

偶联物 (Conjugation)	Unconjugated
修饰 (Modification)	Unmodified
同种型 (Isotype)	IgG
克隆 (Clonality)	Monoclonal
形式 (Form)	Liquid
存放说明 (Storage)	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
储存溶液 (Buffer)	Supplied in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% New type preservative N and 0.05% protective protein.
纯化方式 (Purification)	Affinity purification

免疫原信息 (Immunogen)

基因名 (Gene Name)	XRCC5 CTC box-binding factor 85 kDa subunit; CTC85; CTCBF; DNA repair protein
别名 (Alternative Names)	XRCC5; G22P2; KARP1; Ku autoantigen, 80kDa; Ku80; Ku86 autoantigen related protein 1; KUB2; NFIV;
基因 ID (Gene ID)	7520.0
蛋白 ID (SwissProt ID)	P13010.A synthetic peptide of human Ku80

产品应用 (Application)

稀释比 (Dilution Ratio)	WB 1:500-1:2000,IHC 1:200-1:500,FC 1:50-1:200
蛋白分子量 (Molecular Weight)	83kDa

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研究背景 (Background)

Ku80 the 80-kilodalton subunit of the Ku complex, also known as ATP-dependant DNA helicase II. A single stranded DNA-dependent ATP-dependent helicase. It functions together with the DNA ligase IV-XRCC4 complex in the repair of DNA double-strand break by non-homologous end joining and the completion of V(D)J recombination events. 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: [7957065](http://www.uniprot.org/citations/7957065), PubMed: [8621488](http://www.uniprot.org/citations/8621488), PubMed: [12145306](http://www.uniprot.org/citations/12145306), PubMed: [11493912](http://www.uniprot.org/citations/11493912)). Required for double-strand break repair and V(D)J recombination (PubMed: [7957065](http://www.uniprot.org/citations/7957065), PubMed: [8621488](http://www.uniprot.org/citations/8621488), PubMed: [12145306](http://www.uniprot.org/citations/12145306), PubMed: [11493912](http://www.uniprot.org/citations/11493912)). Also has a role in chromosome translocation (PubMed: [7957065](http://www.uniprot.org/citations/7957065), PubMed: [8621488](http://www.uniprot.org/citations/8621488), PubMed: [12145306](http://www.uniprot.org/citations/12145306), PubMed: [11493912](http://www.uniprot.org/citations/11493912)). The DNA helicase II complex binds preferentially to fork-like ends of double-stranded DNA in a cell cycle-dependent manner (PubMed: [7957065](http://www.uniprot.org/citations/7957065), PubMed: [8621488](http://www.uniprot.org/citations/8621488), PubMed: [12145306](http://www.uniprot.org/citations/12145306), PubMed: [11493912](http://www.uniprot.org/citations/11493912)). It works in the 3'- 5' direction (PubMed: [7957065](http://www.uniprot.org/citations/7957065), PubMed: [8621488](http://www.uniprot.org/citations/8621488), PubMed: [12145306](http://www.uniprot.org/citations/12145306), PubMed: [11493912](http://www.uniprot.org/citations/11493912)). 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: [7957065](http://www.uniprot.org/citations/7957065), PubMed: [8621488](http://www.uniprot.org/citations/8621488), PubMed: [12145306](http://www.uniprot.org/citations/12145306), PubMed: [11493912](http://www.uniprot.org/citations/11493912)). Binding to DNA may be mediated by XRCC6 (PubMed: [7957065](http://www.uniprot.org/citations/7957065), PubMed: [8621488](http://www.uniprot.org/citations/8621488), PubMed: [12145306](http://www.uniprot.org/citations/12145306), PubMed: [11493912](http://www.uniprot.org/citations/11493912)). The XRCC5-XRCC6 dimer acts as

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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:7957065, PubMed:8621488, PubMed:12145306, PubMed:20383123, PubMed:11493912). The XRCC5-XRRC6 dimer is probably involved in stabilizing broken DNA ends and bringing them together (PubMed:7957065, PubMed:8621488, PubMed:12145306, PubMed:20383123). The assembly of the DNA-PK complex to DNA ends is required for the NHEJ ligation step (PubMed:7957065, PubMed:8621488, PubMed:12145306, PubMed:20383123). The XRCC5-XRRC6 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- 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). 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).

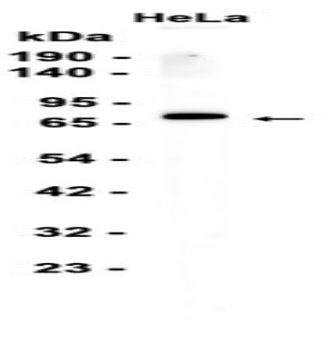
研究领域 (Research Area)

Epigenetics and Nuclear Signaling

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图片 (Image Data)



Western blot analysis of extracts from HeLa cells using RM4615 at 1:1000.

注意事项 (Note)

For research use only .