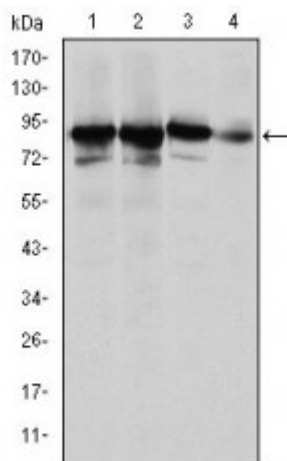


Anti-Ku-80 antibody



Description	Mouse monoclonal to Ku-80.
Model	STJ98211
Host	Mouse
Reactivity	Human, Mouse
Applications	ELISA, FC, IF, IHC, WB
Immunogen	Purified recombinant fragment of human Ku-80 expressed in E. Coli.
Gene ID	7520
Gene Symbol	XRCC5
Dilution range	WB 1:500-1:2000IHC 1:200-1:1000IF 1:200-1:1000FC 1:200-1:400ELISA 1:10000
Specificity	Ku-80 Monoclonal Antibody detects endogenous levels of Ku-80 protein.
Purification	Affinity purification
Clone ID	5C5
Note	For Research Use Only (RUO).
Protein Name	X-ray repair cross-complementing protein 5 86 kDa subunit of Ku antigen ATP-dependent DNA helicase 2 subunit 2 ATP-dependent DNA helicase II 80 kDa subunit CTC box-binding factor 85 kDa subunit CTC85 CTCBF DNA rep
Clonality	Monoclonal
Conjugation	Unconjugated

Isotype	IgG1
Formulation	Ascitic fluid containing 0.03% sodium azide.
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:12833OMIM:194364
Alternative Names	X-ray repair cross-complementing protein 5 86 kDa subunit of Ku antigen ATP-dependent DNA helicase 2 subunit 2 ATP-dependent DNA helicase II 80 kDa subunit CTC box-binding factor 85 kDa subunit CTC85 CTCBF DNA rep
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. In association with NAA15, the XRCC5/6 dimer binds to the osteocalcin promoter and activates osteocalcin expression . The XRCC5/6 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. 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. The XRCC5/6 dimer together with APEX1 acts as a negative regulator of transcription .
Sequence and Domain Family	The EEXXXDDL motif is required for the interaction with catalytic subunit PRKDC and its recruitment to sites of DNA damage.
Cellular Localization	Nucleus Nucleus, nucleolus Chromosome
Post-translational Modifications	Phosphorylated on serine residues. Phosphorylation by PRKDC may enhance helicase activity. Sumoylated. Ubiquitinated by RNF8 via 'Lys-48'-linked ubiquitination following DNA damage, leading to its degradation and removal from DNA damage sites . Ubiquitinated by RNF138, leading to remove the Ku complex from DNA breaks .