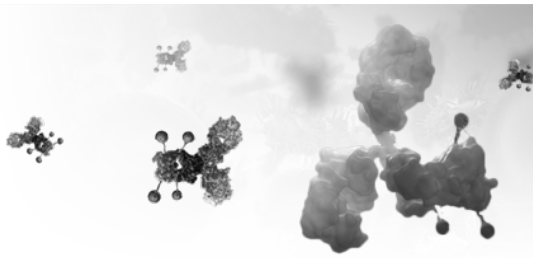

Mouse anti-Human Ku80 monoclonal antibody, clone 8/Lv90 (CABT-B9230)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Immunogen	Human Ku80 aa. 103-315
Isotype	IgG1
Source/Host	Mouse
Species Reactivity	Human
Clone	8/Lv90
Purification	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Conjugate	Unconjugated
Applications	WB; IF
Format	Liquid
Concentration	250 μg/ml
Size	50 μg
Buffer	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.
Storage	Store undiluted at -20°C.

BACKGROUND

Introduction	DNA-dependent protein kinase (DNA-PK) is a trimeric enzyme that contains a catalytic subunit

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of 350 kDa (DNA-PKcs) and a heterodimeric regulatory subunit of 70 kDa (Ku70) and 86 kDa (Ku80). DNA-PKcs is inactive alone and depends on the regulatory subunit for subcellular localization and kinase activity. The DNA-PKcs/Ku70/Ku80 complex is involved in V(D)J recombination and DNA double-stranded break repair. Ku70 and Ku80 are abundant nuclear DNA-binding proteins. Besides functioning in a complex with DNA-PKcs, Ku proteins may act in multiple cellular processes including transcriptional regulation, ATPase and helicase activity, alteration in chromatin structure, cell cycle regulation, and maintenance of telomere length. In rat fibroblasts, Ku80 overexpression leads to hypermethylation and silencing of metallothionein gene expression. Ku70-/- and Ku80-/- cells are less resistant to anticancer drug-induced apoptosis, suggesting a role for Ku proteins in the prevention of apoptotic signaling. Thus, Ku70 and Ku80 may have multiple roles during DNA transcription, repair, and maintenance depending on the protein interactions that are involved.

Keywords PRKDC; protein kinase, DNA-activated, catalytic polypeptide; HYRC; p350; DNAPK; DNPK1; HYRC1; XRCC7; DNA-PKcs; DNA-dependent protein kinase catalytic subunit; p460; DNA-PK catalytic subunit; hyper-radiosensitivity of murine scid mutation, complementing 1;

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