

## [KD Validated] Anti-PRKDC Rabbit mAb

Purified Recombinant Rabbit Monoclonal Antibody

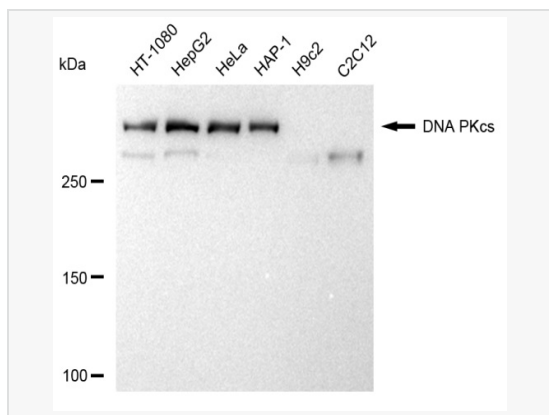
Catalog # R021857

### Product Information

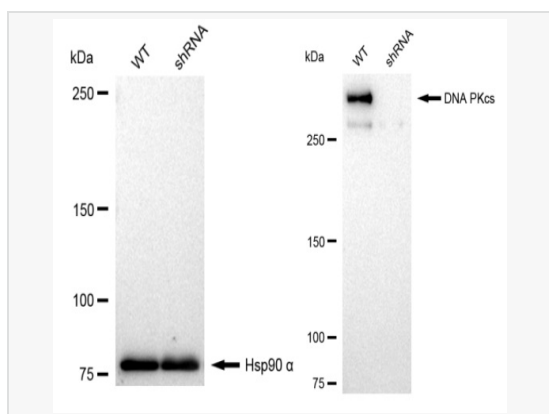
Application	WB, FC, IF (Cell)/ICC
Reactivity	Human
Dilution	WB 1:1,000~1:5,000; FC 1:200~1:2,000; IF 1:100~1:1,000
Host	Rabbit
Clonality	Monoclonal
Clone No.	60S60B40
Isotype	IgG
Label	Unconjugated
Immunogen	A synthesized peptide derived from human DNA-PKcs
Format	Affinity purified monoclonal antibody supplied in PBS with 0.02% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 12 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	[KD Validated] Anti-PRKDC Rabbit mAb [60S60B40] is for research use only and not for use in diagnostic or therapeutic procedures.

### Protein Information

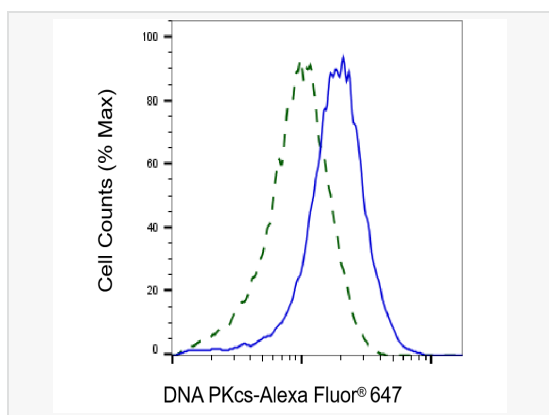
Synonyms	PRKDC; Protein Kinase, DNA-Activated, Catalytic Subunit; DNPK1; P460; DNA-Dependent Protein Kinase Catalytic Subunit; DNA-PKcs; DNA-PKC; DNAPK; XRCC7; HYRC1; P350; HYRC; Protein Kinase, DNA-Activated, Catalytic Polypeptide; DNA-PK Catalytic Subunit; EC 2.7.11.1; DNAPKc; Hyper-Radiosensitivity Of Murine Scid Mutation, Complementing 1; DNA-PKCS; DNAPKC; IMD26.
Calculated MW	Calculated MW: 469 kDa, Observed MW: 469 kDa
Uniprot ID	P78527
Gene ID	5591
Background	The PRKDC gene encodes the catalytic subunit of a nuclear DNA-dependent serine/threonine protein kinase (DNA-PK). The second component is the autoimmune antigen Ku (MIM 152690), which is encoded by the G22P1 gene on chromosome 22q. On its own, the catalytic subunit of DNA-PK is inactive and relies on the G22P1 component to direct it to the DNA and trigger its kinase activity; PRKDC must be bound to DNA to express its catalytic properties.



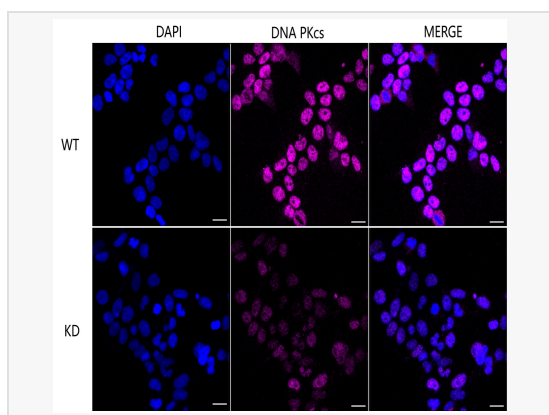
Western blotting analysis using DNA PKcs antibody (R021857). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with DNA PKcs antibody (R021857, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (1:20,000) respectively. Image was developed using ECL Substrate Kit.



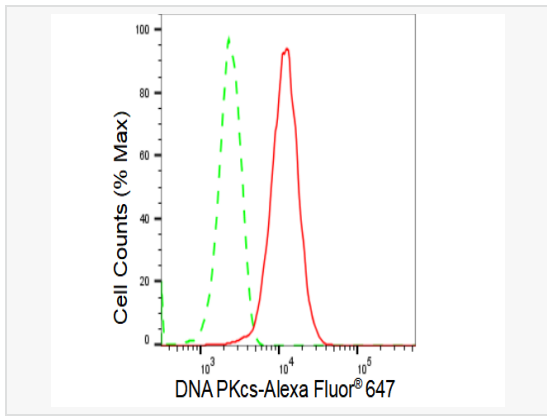
Western blotting analysis using DNA PKcs antibody (R021857). DNA PKcs expression in wild type (WT) and DNA PKcs shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with DNA PKcs antibody (R021857, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (1:20,000) respectively. Image was developed using ECL Substrate Kit.



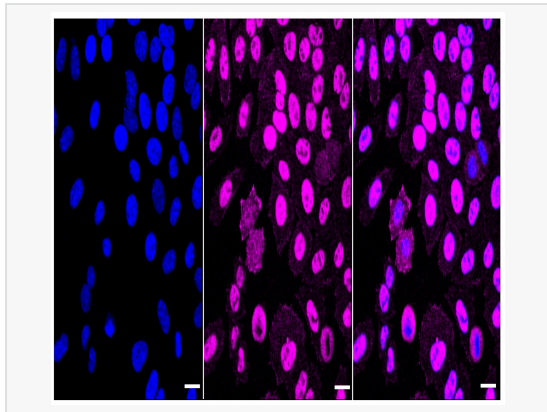
Validation of DNA PKcs knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with DNA PKcs antibody (R021857, 1:2,000) and analyzed using BD flow cytometer.



Immunocytochemical staining of HeLa cells using DNA PKcs antibody (R021857, 1:1,000). Top panel: wild-type (WT); Bottom panel: DNA PKcs shRNA knockdown (KD). Nuclei were stained blue with DAPI; DNA PKcs was stained magenta with Alexa Fluor® 647. Scale bar, 20 µm.



Flow cytometric analysis of DNA PKcs expression in HepG2 cells using DNA PKcs antibody (R021857, 1:2,000). Green, isotype control; red, DNA PKcs.



Immunocytochemical staining of HepG2 cells with DNA PKcs antibody (R021857, 1:1,000). Nuclei were stained blue with DAPI; DNA PKcs was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20  $\mu$ m.