

Datasheet for ABIN6241643

## anti-PRKDC antibody

### 4 Images



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### Overview

Quantity:	100 µL
Target:	PRKDC
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This PRKDC antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunoprecipitation (IP), Immunocytochemistry (ICC)

### Product Details

Immunogen: Recombinant Protein

### Target Details

Target:	PRKDC
Alternative Name:	DNA-PKcs ( <a href="#">PRKDC Products</a> )
Background:	Serine/threonine-protein kinase that acts as a molecular sensor for DNA damage. Involved in DNA non-homologous end joining (NHEJ) required for double-strand break (DSB) repair and V(D)J recombination. Must be bound to DNA to express its catalytic properties. Promotes processing of hairpin DNA structures in V(D)J recombination by activation of the hairpin endonuclease artemis (DCLRE1C). The assembly of the DNA-PK complex at DNA ends is also required for the NHEJ ligation step. Required to protect and align broken ends of DNA. May also act as a scaffold protein to aid the localization of DNA repair proteins to the site of damage.

## Target Details

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Found at the ends of chromosomes, suggesting a further role in the maintenance of telomeric stability and the prevention of chromosomal end fusion. Also involved in modulation of transcription. Recognizes the substrate consensus sequence [ST]-Q. Phosphorylates 'Ser-139' of histone variant H2AX/H2AFX, thereby regulating DNA damage response mechanism. Phosphorylates DCLRE1C, c-Abl/ABL1, histone H1, HSPCA, c-jun/JUN, p53/TP53, PARP1, POU2F1, DHX9, SRF, XRCC1, XRCC1, XRCC4, XRCC5, XRCC6, WRN, MYC and RFA2. Can phosphorylate C1D not only in the presence of linear DNA but also in the presence of supercoiled DNA. Ability to phosphorylate p53/TP53 in the presence of supercoiled DNA is dependent on C1D. Contributes to the determination of the circadian period length by antagonizing phosphorylation of CRY1 'Ser-588' and increasing CRY1 protein stability, most likely through an indirect mechanism. Interacts with CRY1 and CRY2, negatively regulates CRY1 phosphorylation.

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UniProt: [P78527](#)

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Pathways: [DNA Damage Repair](#), [Production of Molecular Mediator of Immune Response](#)

## Application Details

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Application Notes: IP: 1:500. WB: 1:1000. IHC: 1:100. ICC: 1:100

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Restrictions: For Research Use only

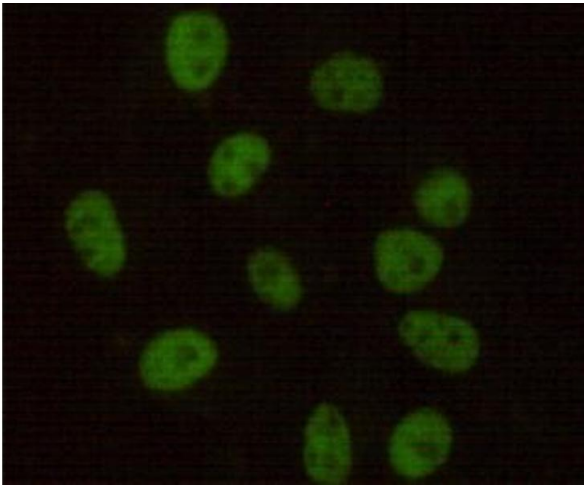
## Handling

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Format: Liquid

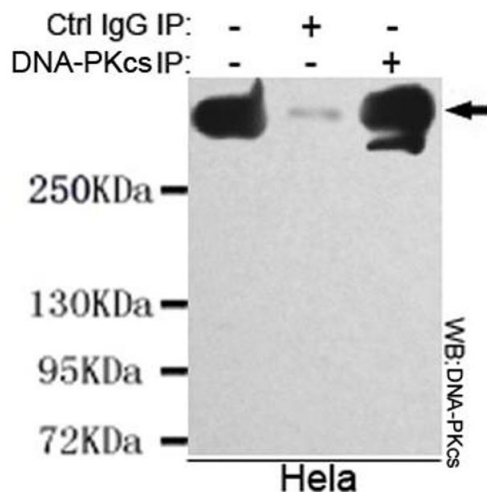
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Storage: 4 °C, -20 °C



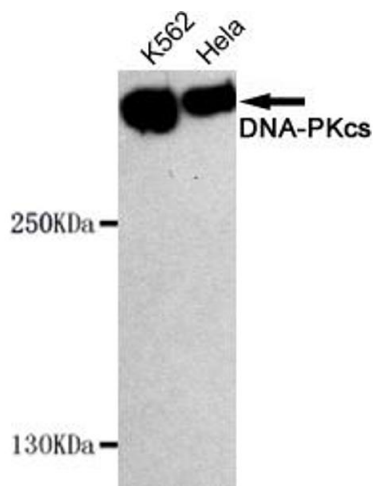
### Immunocytochemistry

**Image 1.** Immunocytochemistry stain of HeLa using DNA-PKcs mouse mAb (1:100).



### Immunoprecipitation

**Image 2.** Immunoprecipitation analysis of HeLa cell lysate using DNA-PKcs mouse mAb.



### Western Blotting

**Image 3.** Western blot detection of DNA-PKcs in HeLa and K562 cell lysates using DNA-PKcs mouse mAb (1:1000 diluted). Predicted band size: 450 kDa, Observed band size: 450 kDa.

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN6241643.