Datasheet for ABIN7150402

# anti-PRKDC antibody (Catalytic Subunit)

1 Image

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## Overview

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|---|---|
| Quantity: | 100 µg |
| Target: | PRKDC |
| Binding Specificity: | AA 3747-4015, Catalytic Subunit |
| Reactivity: | Human |
| Host: | Rabbit |
| Clonality: | Polyclonal |
| Conjugate: | This PRKDC antibody is un-conjugated |
| Application: | ELISA, Western Blotting (WB) |

## Product Details

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| Immunogen: | Recombinant Human DNA-dependent protein kinase catalytic subunit protein (3747-4015AA) |
| Isotype: | IgG |
| Cross-Reactivity: | Human |
| Purification: | >95%, Protein G purified |

## Target Details

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|---|---|
| Target: | PRKDC |
| Alternative Name: | PRKDC (PRKDC Products) |
| Background: | 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) |

## Target Details

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| | 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. 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 machanism. Interacts with CRY1 and CRY2, negatively regulates CRY1 phosphorylation.<br>Aliases: DNA dependent protein kinase catalytic subunit antibody, DNA PK catalytic subunit antibody, DNA-dependent protein kinase catalytic subunit antibody, DNA-PK catalytic subunit antibody, DNA-PKcs antibody, DNAPK antibody, DNAPK catalytic subunit antibody, DNPK 1 antibody, DNPK1 antibody, Hyper radiosensitivity of murine scid mutation, complementing 1 antibody, Hyperradiosensitivity complementing 1, mouse, homolog of 1 antibody, HYRC 1 antibody, HYRC antibody, HYRC1 antibody, IMD26 antibody, p350 antibody, p460 antibody, PKRDC antibody, PRKDC antibody, PRKDC_HUMAN antibody, Protein Kinase DNA Activated Catalytic Polypeptide antibody, XRCC 7 antibody, XRCC7 antibody |
| UniProt: | P78527 |
| Pathways: | DNA Damage Repair, Production of Molecular Mediator of Immune Response |

## Application Details

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| Application Notes: | Recommended dilution: WB:1:500-1:5000, |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |

## Handling

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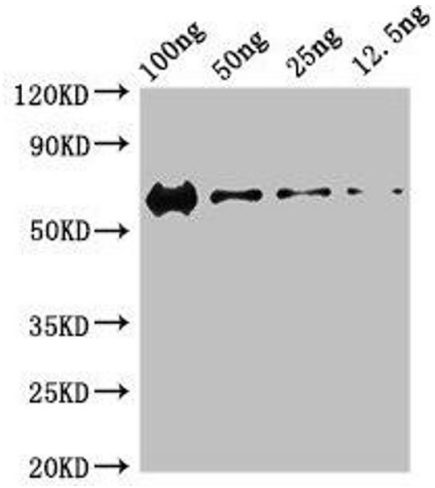
|---|---|
| Buffer: | Preservative: 0.03 % Proclin 300<br>Constituents: 50 % Glycerol, 0.01M PBS, pH 7.4 |
| Preservative: | ProClin |
| Precaution of Use: | This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only. |
| Storage: | -20 °C,-80 °C |
| Storage Comment: | Upon receipt, store at -20°C or -80°C. Avoid repeated freeze. |

## Images




**Western Blotting**

**Image 1.** Western Blot Positive WB detected in Recombinant protein All lanes: PRKDC antibody at 3 µg/mL Secondary Goat polyclonal to rabbit IgG at 1/50000 dilution predicted band size: 60 kDa observed band size: 60 kDa