

Rabbit anti-Human DNA PK Polyclonal Antibody | anti-PRKDC antibody

DNA PK (PRKDC) Antibody (C-term)

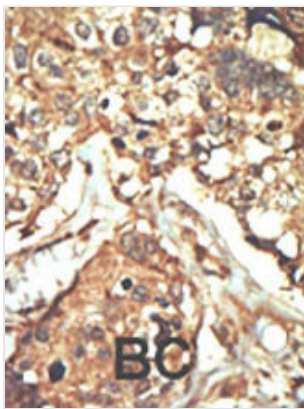
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA290694	Rabbit	Human	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

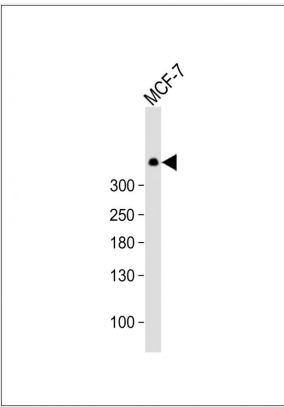
DNA PK; Polyclonal Antibody; DNA PK (PRKDC) Antibody (C-term); DNA-dependent protein kinase catalytic subunit; DNA-PK catalytic subunit; DNA-PKcs; DNPK1; p460; PRKDC; HYRC; HYRC1; anti-PRKDC antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	Ig
Specificity	This DNA PK (PRKDC) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 4075–4104 amino acids from the C-terminal region of human PRKDC.
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Sequence Length	4097
Applicable Applications for anti-PRKDC antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Subtitle	Purified Rabbit Polyclonal Antibody (Pab)
Cellular Location	Nucleus. Nucleus, nucleolus.
Antigen Region	4075-4104 aa
Antigen Type	Synthetic Peptide
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.



IHC (Immunohistochemistry)
Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



WB (Western Blot)
Anti-PRKDC Antibody (R4082) at 1:1000 dilution + MCF-7 whole cell lysate. Lysates/proteins at 20 ug per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 469 kDa. Blocking/Dilution buffer: 5% NFDM/TBST.

ADDITIONAL INFORMATION

Related Product Information for anti-PRKDC antibody	Description: 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. [supplied by OMIM] 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. 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.
Product Categories/Family for anti-PRKDC antibody	Primary Antibodies; Cell Biology; Signal Transduction
References	Goudelock, D.M., et al., J. Biol. Chem. 278 (32):29940-29947 (2003). Ding, Q., et al., Mol. Cell. Biol. 23 (16):5836-5848 (2003). Lucero, H., et al., J. Biol. Chem. 278 (24):22136-22143 (2003). Calsou, P., et al., J. Mol. Biol. 326 (1):93-103 (2003). Karpova, A.Y., et al., Proc. Natl. Acad. Sci. U.S.A. 99 (5):2818-2823 (2002).

NCBI AND UNIPROT INFORMATION

NCBI GI #	126032350
NCBI GeneID	5591
NCBI Accession #	NP_001075109.1
NCBI GenBank Nucleotide #	NM_001081640.1

UniProt Accession #	P78527 ; P78528 ; Q13327 ; Q13337 ; Q14175 ; Q59H99 ; Q7Z611 ; Q96SE6 ; Q9UME3
Molecular Weight	469089 Da
NCBI Official Full Name	DNA-dependent protein kinase catalytic subunit isoform 2
NCBI Official Synonym Full Names	protein kinase, DNA-activated, catalytic polypeptide
NCBI Official Symbol	PRKDC
NCBI Official Synonym Symbols	HYRC; p350; DNAPK; DNPk1; HYRC1; IMD26; XRCC7; DNA-PKcs
NCBI Protein Information	DNA-dependent protein kinase catalytic subunit
UniProt Protein Name	DNA-dependent protein kinase catalytic subunit
UniProt Gene Name	PRKDC
UniProt Synonym Gene Names	HYRC; HYRC1; DNA-PK catalytic subunit; DNA-PKcs
UniProt Entry Name	PRKDC_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/polyclonal/dna-pk-antibody-immunohistochemistry-western-blot-elisa/290694>