

**产品名称: DNA-PKCS (phospho Ser2056) Rabbit Polyclonal Antibody**  
**产品货号: APRab04552**



## 产品概述 (Summary)

|                        |                                                       |
|------------------------|-------------------------------------------------------|
| 产品名称 (Production Name) | DNA-PKCS (phospho Ser2056) Rabbit Polyclonal Antibody |
| 描述 (Description)       | Rabbit polyclonal Antibody                            |
| 宿主 (Host)              | Rabbit                                                |
| 应用 (Application)       | WB,IHC,ICC/IF,ELISA                                   |
| 种属反应性 (Reactivity)     | Human,Mouse                                           |

## 产品性能 (Performance)

|                     |                                                                                                   |
|---------------------|---------------------------------------------------------------------------------------------------|
| 偶联物 (Conjugation)   | Unconjugated                                                                                      |
| 修饰 (Modification)   | Phosphorylated                                                                                    |
| 同种型 (Isotype)       | IgG                                                                                               |
| 克隆 (Clonality)      | Polyclonal                                                                                        |
| 形式 (Form)           | Liquid                                                                                            |
| 存放说明 (Storage)      | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.          |
| 储存溶液 (Buffer)       | Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N. |
| 纯化方式 (Purification) | Affinity purification                                                                             |

## 免疫原信息 (Immunogen)

|                        |                                                                                                                                                        |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 基因名 (Gene Name)        | PRKDC                                                                                                                                                  |
| 别名 (Alternative Names) | PRKDC; HYRC; HYRC1; DNA-dependent protein kinase catalytic subunit; DNA-PK catalytic subunit; DNA-PKcs; DNPK1; p460                                    |
| 基因 ID (Gene ID)        | 5591.0                                                                                                                                                 |
| 蛋白 ID (SwissProt ID)   | P78527.The antiserum was produced against synthesized peptide derived from human DNA-PK around the phosphorylation site of Ser2056. AA range:2022-2071 |

## 产品应用 (Application)

|                      |                                                                         |
|----------------------|-------------------------------------------------------------------------|
| 稀释比 (Dilution Ratio) | WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:10000-1:20000 |
|----------------------|-------------------------------------------------------------------------|

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#### 蛋白分子量 (Molecular Weight)

#### 研究背景 (Background)

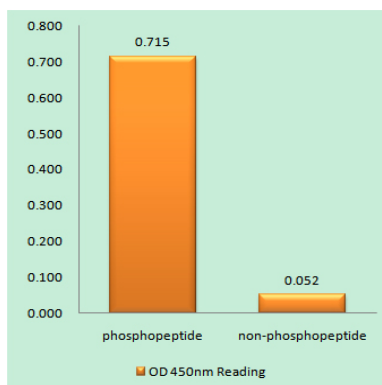
This gene encodes the catalytic subunit of the DNA-dependent protein kinase (DNA-PK). It functions with the Ku70/Ku80 heterodimer protein in DNA double strand break repair and recombination. The protein encoded is a member of the PI3/PI4-kinase family.[provided by RefSeq, Jul 2010],catalytic activity:ATP + a protein = ADP + a phosphoprotein.,enzyme regulation:Inhibited by wortmannin. Activity of the enzyme seems to be attenuated by autophosphorylation.,function:Serine/threonine-protein kinase that acts as a molecular sensor for DNA damage. Involved in DNA nonhomologous 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, c-myc/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 TP53/p53 in the presence of supercoiled DNA is dependent on C1D.,PTM:Phosphorylated upon DNA damage, probably by ATM or ATR. Autophosphorylated on Thr-2609, Thr-2638 and Thr-2647. Thr-2609 is a DNA damage-inducible phosphorylation site (inducible with ionizing radiation, IR). Autophosphorylation induces a conformational change that leads to remodeling of the DNA-PK complex, requisite for efficient end processing and DNA repair.,similarity:Belongs to the PI3/PI4-kinase family.,similarity:Contains 1 FAT domain.,similarity:Contains 1 FATC domain.,similarity:Contains 1 PI3K/PI4K domain.,similarity:Contains 2 HEAT repeats.,similarity:Contains 3 TPR repeats.,subunit:DNA-PK is a heterotrimer of PRKDC and the Ku p70-p86 (XRCC6-XRCC5) dimer. Formation of this complex may be promoted by interaction with ILF3. Associates with the DNA-bound Ku heterodimer, but it can also bind to and be activated by free DNA. Interacts with DNA-PKcs-interacting protein (KIP) with the region upstream the kinase domain. PRKDC alone also interacts with and phosphorylates DCLRE1C, thereby activating the latent endonuclease activity of this protein. Interacts with C1D.,

#### 研究领域 (Research Area)

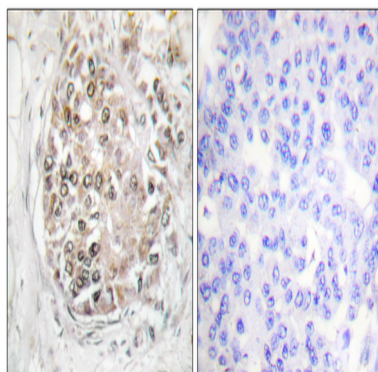
Non-homologous end-joining;Cell\_Cycle\_G1S;Cell\_Cycle\_G2M\_DNA;

#### 图片 (Image Data)

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Antibody  
产品货号: AP Rab04552



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using DNA-PK (Phospho-Ser2056) Antibody



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using DNA-PK (Phospho-Ser2056) Antibody. The picture on the right is blocked with the phospho peptide.

### 注意事项 (Note)

For research use only .