

DATASHEET

DNA-PKcs Mouse Monoclonal Antibody(C3467)

CAT. NO. AMA03079

KEY FEATURES

| | | | |
|---------------|---|---------------|--------------|
| Target | DNA-PKcs | Source / Host | Mouse |
| Reactivity | Human | Clonality | Monoclonal |
| Applications | WB, IHC, IF/ICC, IP | Conjugation | Unconjugated |
| Form / Buffer | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3. | Storage | at-20°C |

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) . Recruited by XRCC5 and XRCC6 to DNA ends and is required to (1) protect and align broken ends of DNA, thereby preventing their degradation, (2) and sequester the DSB for repair by NHEJ . Acts as a scaffold protein to aid the localization of DNA repair proteins to the site of damage . The assembly of the DNA-PK complex at DNA ends is also required for the NHEJ ligation step .

APPLICATION

To ensure optimal assay performance, AREX recommends conducting reagent titration tailored to each testing system for optimal detection results.

| | |
|--------|----------------|
| WB | 1:500 - 1:1000 |
| IHC | 1:50 - 1:100 |
| IF/ICC | 1:50 - 1:100 |
| IP | 1:10 - 1:50 |

*Results are sample-specific. Please refer to your local assay conditions and test parameters for reference.

PRODUCT OVERVIEW

| | |
|-------------------|--|
| Description | Mouse monoclonal antibody to DNA-PKcs |
| Specificity | Recognizes endogenous levels of DNA-PKcs protein. |
| Antibody Type | Primary antibody |
| Immunogen | Purified recombinant human DNA-PKcs protein fragments expressed in E.coli |
| Purification | The antibody was purified by immunogen affinity chromatography. |
| Molecular Weight | Predicted: 469 kD; Observed: 450 kD |
| Form/Buffer | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3. |
| Alternative Names | HYRC; HYRC1; DNA-dependent protein kinase catalytic subunit; DNA-PK catalytic subunit; DNA-PKcs; DNPK1; p460 |
| Gene Symbol | PRKDC |
| Entrez Gene | 5591(Human) |
| SwissProt | P78527(Human) |

*AREX continuously optimizes our products. Webpage content may not reflect the latest updates. For inquiries, please contact info@arexbio.com or your local distributor.

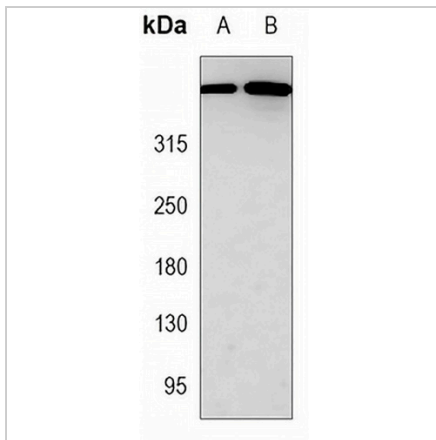
*Clone Number, Reactivity, Source/Host and Clonality can be found in the product name and Key Features section above.

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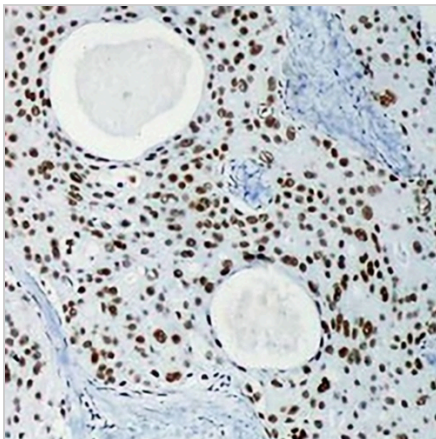
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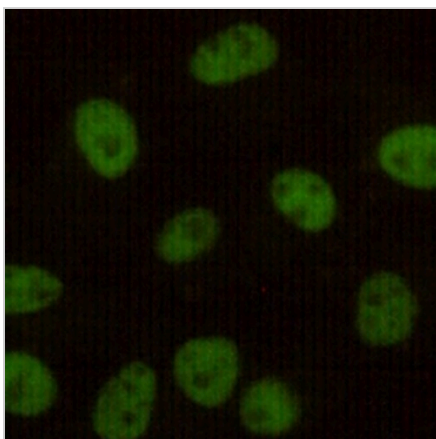
DATA



Western blot analysis of DNA-PKcs expression in HeLa (A), K562 (B) whole cell lysates. (Predicted band size: 469 kD; Observed band size: 450 kD)



Immunohistochemical analysis of DNA-PKcs staining in human breast carcinoma formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of DNA-PKcs staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AREX® Fluor 488 -conjugated secondary antibody (green) in PBS at room temperature in the dark.

STORAGE

Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.

NOTE

For Research Use Only. Not for diagnostic, therapeutics, prophylactic or in vivo use.