

**Monoclonal Anti- DNA-dependent protein kinase, catalytic subunit, DNA-PKcs / PRKDC****Catalog#** BMA1017**Lot #** Check on the product label**Size** 100 µg**Isotype** IgG2a**Clone #** N9**Host** Mouse**Reactivity**

Human, mouse

**Product Form** Liquid**Purification** Protein A purified**Immunogen**

Recombinant DNA-PKcs protein.

**Recommend Application**

Western Blot, WB (1:500)

Immunohistochemistry, IHC-P (1:100)

Immunocytochemistry, ICC (1:50)

Other applications have not been tested.

The optimal dilutions should be determined by end user.

**Storage Buffer**

1\*PBS (pH7.4), 0.2% BSA, 40% Glycerol and 0.05% Sodium Azide.

**Storage Instruction**

Store at 4°C after thawing (1 week).

Aliquot and store at -20°C for long term (at least one year).

Avoid repeated freeze and thaw cycles.

**Background**

DNA-dependent protein kinase, catalytic subunit, also known as DNA-PKcs, is an enzyme that belongs to the phosphatidylinositol 3-kinase-related

kinase protein family. Anderson and Lees-Miller (1992) noted that DNA-PK had been shown in vitro to phosphorylate several transcription factors, suggesting that it functions in cell homeostasis by modulating transcription. [1] It acts as a molecular sensor for DNA damage, [2] and it may also act as a scaffold protein to aid the localization of DNA repair proteins to the site of damage. [3]

**Reference**

1. Anderson, C. W., Lees-Miller, S. P. The nuclear serine/threonine protein kinase DNA-PK. Crit. Rev. Eukaryot. Gene Expr. 2: 283-314, 1992.
2. Yavuzer U., Smith G.C.M., Bliss T., Werner D., Jackson S.P. "DNA end-independent activation of DNA-PK mediated via association with the DNA-binding protein C1D." Genes Dev. 12:2188-2199(1998)
3. Soubeyrand S., Pope L., Pakuts B., Hache R.J. "Threonines 2638/2647 in DNA-PK are essential for cellular resistance to ionizing radiation." Cancer Res. 63:1198-1201(2003)

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