

## Purified anti-DNA-PKcs Phosphorylated (Thr2609)

**Catalog #/** 612901 / 25 µg  
**Size:** 612902 / 100 µg

**Clone:** 10B1

**Isotype:** Mouse IgG1, κ

**Immunogen:** Modified Peptide

**Reactivity:** Human, reacts with Thr2609-phosphorylated DNA-PKcs

**Preparation:** The antibody was purified by protein G affinity chromatography.

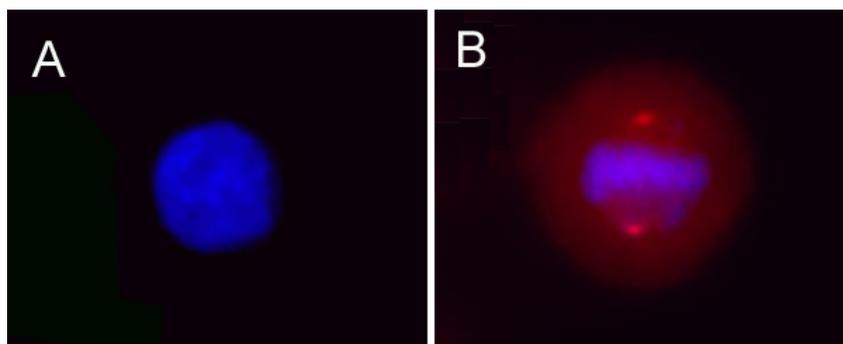
**Formulation:** This antibody is provided in phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide. Final antibody concentration is 0.5 mg/ml.

**Storage:** Upon receipt, store undiluted at 4°C.

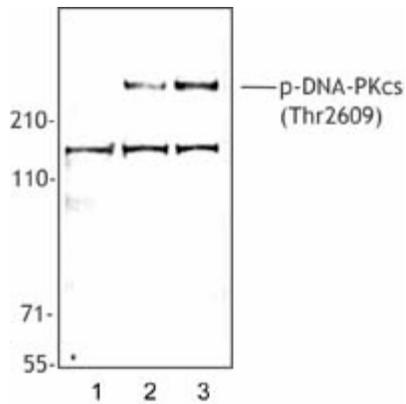
## Applications

**Applications:** WB, IF

**Recommended Usage:** Each lot of this antibody is quality control tested by Western blotting. Western blotting, suggested working dilution(s): Use 5 µg per 5 ml antibody dilution buffer for each mini-gel. For immunofluorescence microscopy: Use a dilution range of 1~4µg/ml. It is recommended that the reagent be titrated for optimal performance for each application.



Untreated HeLa cells (Panel A), or overnight nocodazole treated HeLa cells (Panel B) stained with purified mouse monoclonal antibody against phospho-DNA-PKcs (Thr2609) (clone 10B1), followed by Rhodamine Red-X conjugated Donkey anti-mouse IgG and DAPI.



MOLT4 nuclear extract was resolved by electrophoresis, transferred to nitrocellulose, and probed with anti-DNA-PKcs (Thr2609) antibody. Proteins were visualized using a goat anti-mouse secondary conjugated to HRP and a chemiluminescence detection system. Lane 1, untreated MOLT4 cells. Lane 2, MOLT4 cells exposed to 2 Gy radiation. Lane 3, MOLT4 cells exposed to 10 Gy radiation. In both cases, cells were harvested 30 minutes after radiation.

## Antigen Information

**Other Names:** DNA-protein kinase catalytic subunit, DNA-activated protein kinase, DNA-dependent protein kinase

**Structure:** PI3/PI4-Kinases family. Spliced products 460 kD, 470 kD

**Distribution:** Nuclear

**Function:** Serine/Threonine kinase, dsDNA break repair, VDJ recombination, transcriptional modulator

**Regulation:** Must bind DNA ends to become active

**Modification:** Phosphorylation

**Interaction:** Ku70/Ku80, KIP, DNA-ligase IV, XRCC4

**Description:** DNA-protein kinase catalytic subunit (DNA-PKcs) also known as DNA-activated kinase is a nuclear 460-470 kD serine threonine kinase involved in double-stranded DNA break repair, VDJ recombination, and transcriptional modulation. DNA-PKcs must bind DNA ends to become active. DNA-PKcs is modified by phosphorylation and has been shown to interact with Ku70/Ku80, KIP, DNA-ligase IV, and XRCC4 proteins. Phosphorylated DNA-PKcs is upregulated after DNA damage. The 10B1 monoclonal antibody recognizes phosphorylated human DNA-PKcs (Thr2609) and has been shown to be useful for immunofluorescence staining and Western blotting.

### Antigen References:

1. Hartley, K., *et al.*, 1995. *Cell*. 82:849.
2. Connelly, M., *et al.*, 1996. *Gene*. 175:271.
3. Douglas, P., *et al.*, 2002. *Biochem. J.* 368:243
4. Calsou, P., *et al.*, 2003. *J. Mol. Biol.* 326:93.