

## Anti-PCNA antibody, rabbit polyclonal, Validated with PCNA protein

Cat. # 70-080, Size:100 µg

### Background:

Proliferating cell nuclear antigen (**PCNA**) is a 29 kDa homotrimeric protein known to act as a co-factor for DNA polymerase delta, which is responsible for leading strand DNA replication. PCNA was originally identified as an antigen that is expressed in the nuclei of cells during the DNA synthesis phase of the cell cycle. Crystal structure data suggests that a PCNA homotrimer ring can encircle and slide along the DNA double helix. Multiple proteins involved in DNA replication, DNA repair, and cell cycle control bind to PCNA rather than directly associating with DNA, thus facilitating fast processing of DNA. PCNA is a useful marker for DNA synthesis and is highly conserved among most species.

### Specifications:

**Validation:** Specificity has been validated by WB with purified full-size PCNA protein (Fig.2).

**Reactivity:** Mammalian PCNA including human, mouse, rat, hamster, and PCNA of chicken, Xenopus

**Immunogen:** Purified recombinant human PCNA (full-size, no-tag attached, #10-151)

**Form:** Purified IgG, 1 mg/ml in PBS, 50% glycerol. Filter sterilized. No preservative nor carrier added.

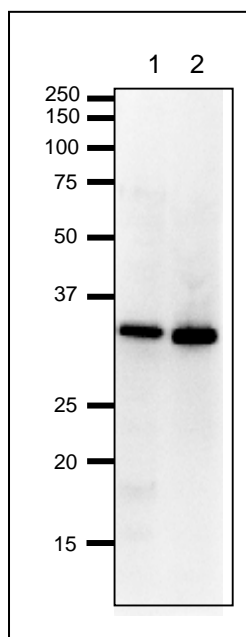
**Storage:** Shipped at 4°C and store at -20°C (Avoid freezing by storing below -25°C)

### Applications:

- Western blotting (1/1,000-1/2,000 dilution)
- Immuno-precipitation (1/100-1/500)
- Immuno-fluorescence staining / Immuno-cytochemistry (1/100~1/1,000 dilution)
- Dot blot (1/500~1/2,000). Could detect less than 0.3 ng of PCNA
- ELISA (1/500~1/2,000). Could detect less than 1 ng of PCNA by direct ELISA.

**Data Link:** Swiss-Prot [P12004](#) (human), [P04961](#) (rat), [P17918](#) (mouse), [P18248](#) (Xenopus laevis)

**Related product:** #10-151 PCNA, functional



**Fig.1 Western Blot of PCNA in HeLa cells and Xenopus**

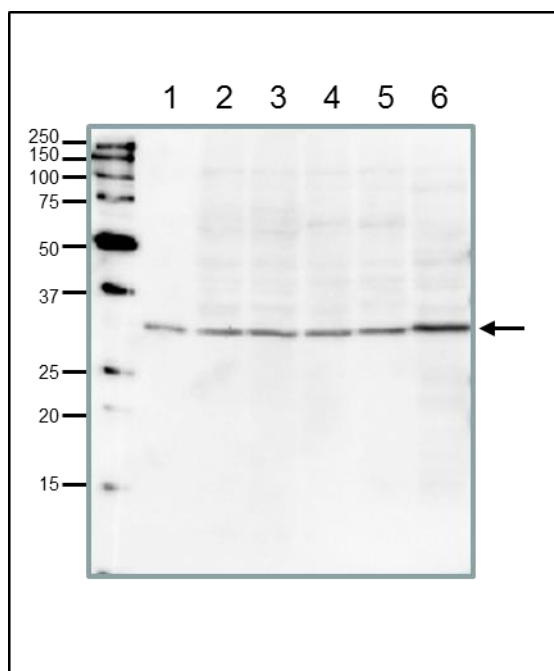
**egg extract.** Anti-PCNA antibody was used at 1/1,000 dilution.

Second antibody (goat anti-rabbit IgG antibody HRP-conjugated, ab97051) was used at 1/10,000 dilution.

1. HeLa cell extract (20  $\mu$ g)

2. Xenopus egg extract (20  $\mu$ g)

Molecular mass of PCNA is 29 kDa



**Fig.2 Western blot of PCNA in the whole cell extracts.** Anti-PCNA

antibody was used at 1/1,000 dilution. Second antibody (goat anti-rabbit IgG antibody HRP-conjugated, ab97051) was used at 1/10,000 dilution.

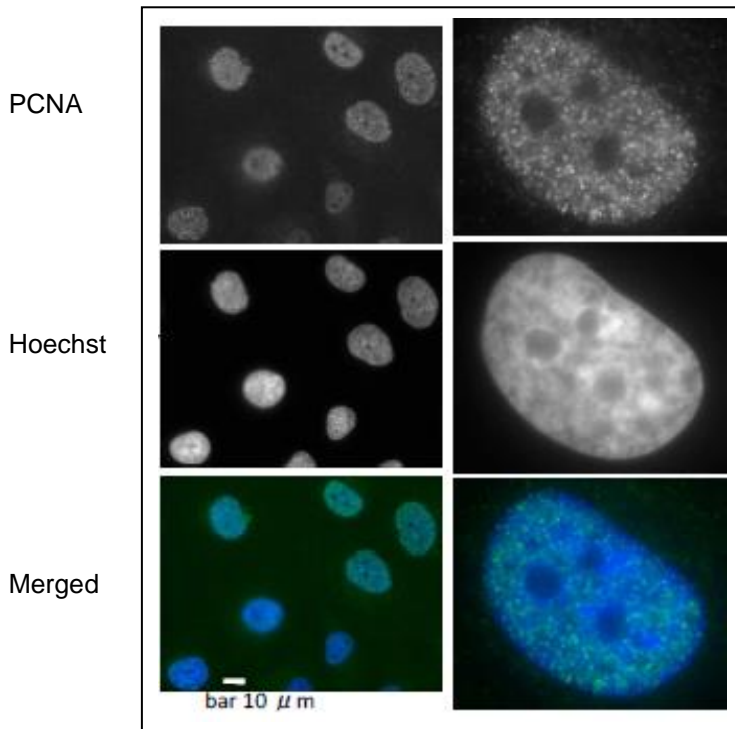
1. Full-size recombinant human PCNA protein (5 ng)

2. HeLa (human), 20  $\mu$ g

3. MCF7 (human), 20  $\mu$ g

4. NIH3T3 (mouse), 20  $\mu$ g

5. CHO (hamster), 20  $\mu$ g



**Fig.3 Immuno-fluorescence staining of PCNA. in GM0637 cells (human fibroblast).** Cells were fixed with 4% paraformaldehyde, permeabilized with 0.5% Triton and added with the antibody at 1/100 dilution. As the second antibody, goat anti-rabbit IgG conjugated with Alexa 488 was used at 1/10,000 dilution. DNA was stained with Heachst. PCNA foci were detected in the nuclei