

**PCNA Antibody (Center)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AW5234**

**Specification**

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**PCNA Antibody (Center) - Product Information**

Application	IF, WB, IHC-P, FC,E
Primary Accession	<a href="#">P12004</a>
Other Accession	<a href="#">P04961</a> , <a href="#">P17918</a> , <a href="#">P61258</a> , <a href="#">P57761</a> , <a href="#">Q9DEA3</a> , <a href="#">Q3ZBW4</a>
Reactivity	Human, Mouse, Rat
Predicted	Bovine, Chicken, Hamster, Monkey
Host	Rabbit
Clonality	Polyclonal
Calculated MW	H=28;M=28;Rat=28 KDa
Isotype	Rabbit IgG
Antigen Source	HUMAN

**PCNA Antibody (Center) - Additional Information**

**Gene ID** 5111

**Antigen Region**  
89-117

**Other Names**  
PCNA; Proliferating cell nuclear antigen; Cyclin

**Dilution**  
IF~~1:10~50  
WB~~1:1000  
IHC-P~~1:10~50  
FC~~1:10~50

**Target/Specificity**  
This PCNA antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 89-117 amino acids from the Central region of human PCNA.

**Format**  
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**  
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**  
PCNA Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

## PCNA Antibody (Center) - Protein Information

**Name** PCNA

### Function

Auxiliary protein of DNA polymerase delta and epsilon, is involved in the control of eukaryotic DNA replication by increasing the polymerase's processibility during elongation of the leading strand (PubMed:<a href="http://www.uniprot.org/citations/35585232" target="\_blank">35585232</a>). Induces a robust stimulatory effect on the 3'-5' exonuclease and 3'-phosphodiesterase, but not apurinic-apyrimidinic (AP) endonuclease, APEX2 activities. Has to be loaded onto DNA in order to be able to stimulate APEX2. Plays a key role in DNA damage response (DDR) by being conveniently positioned at the replication fork to coordinate DNA replication with DNA repair and DNA damage tolerance pathways (PubMed:<a href="http://www.uniprot.org/citations/24939902" target="\_blank">24939902</a>). Acts as a loading platform to recruit DDR proteins that allow completion of DNA replication after DNA damage and promote postreplication repair: Monoubiquitinated PCNA leads to recruitment of translesion (TLS) polymerases, while 'Lys-63'-linked polyubiquitination of PCNA is involved in error-free pathway and employs recombination mechanisms to synthesize across the lesion (PubMed:<a href="http://www.uniprot.org/citations/24695737" target="\_blank">24695737</a>).

### Cellular Location

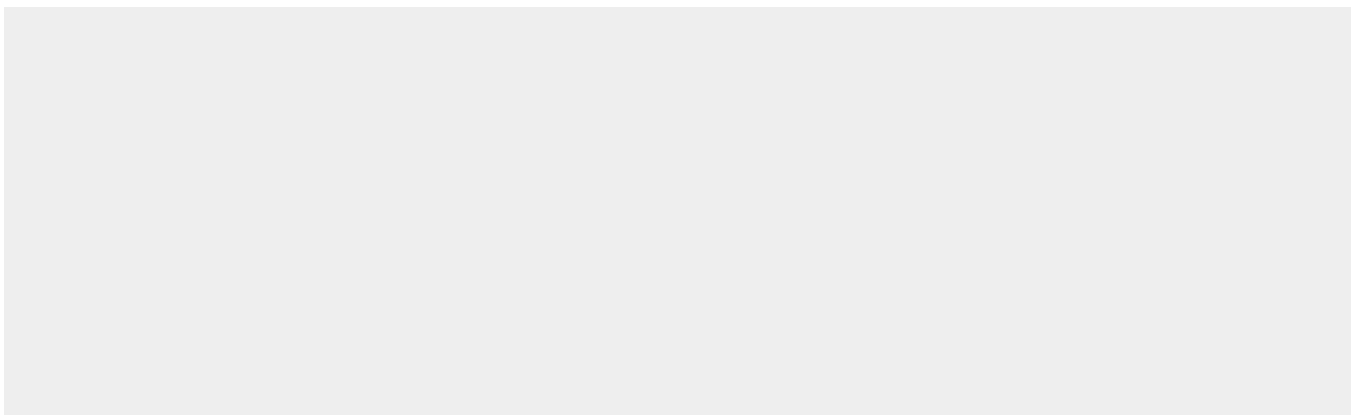
Nucleus Note=Colocalizes with CREBBP, EP300 and POLD1 to sites of DNA damage (PubMed:24939902). Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase (PubMed:15543136). Co-localizes with SMARCA5/SNF2H and BAZ1B/WSTF at replication foci during S phase (PubMed:15543136). Together with APEX2, is redistributed in discrete nuclear foci in presence of oxidative DNA damaging agents.

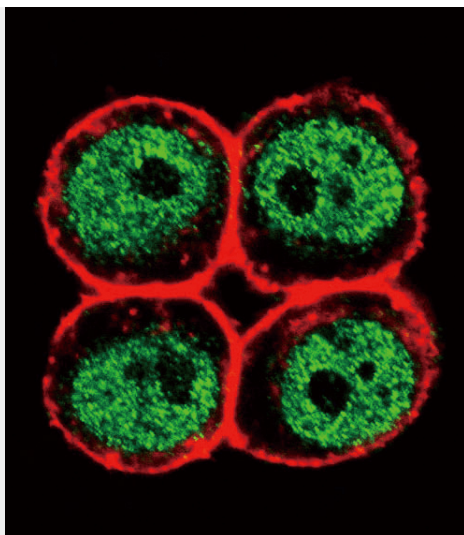
## PCNA Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

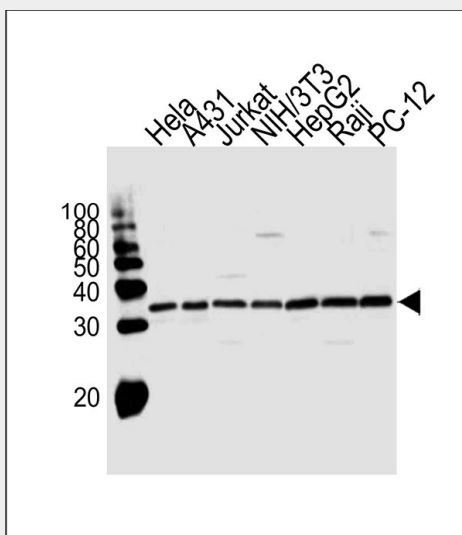
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## PCNA Antibody (Center) - Images

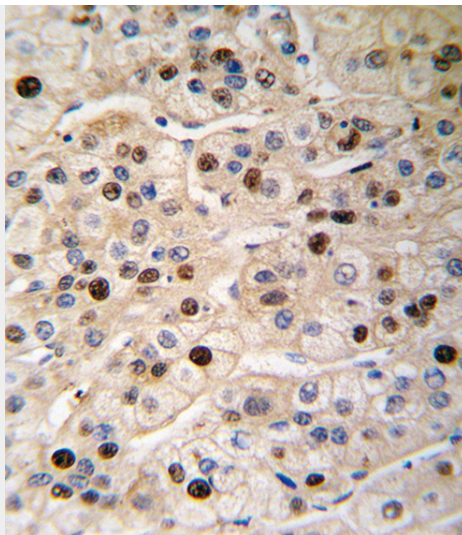




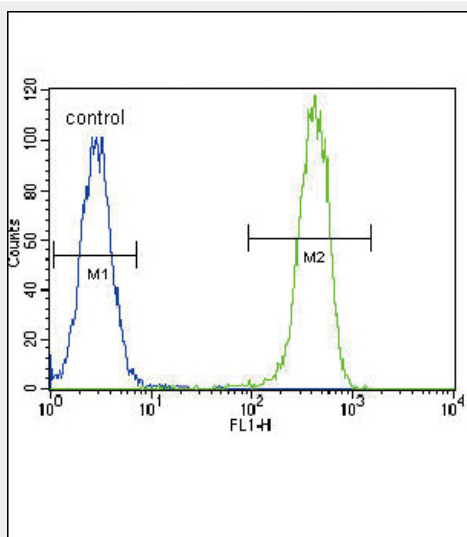
Confocal immunofluorescent analysis of PCNA Antibody (Center)(Cat#AW5234) with HeLa cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).



Western blot analysis of lysates from HeLa, A431, Jurkat, mouse NIH/3T3, HepG2, Raji, rat PC-12 cell line (from left to right), using PCNA Antibody (Center)(Cat. #AW5234). AW5234 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with PCNA antibody (Center) (Cat. #AW5234), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



PCNA Antibody (Center) (Cat. #AW5234) flow cytometric analysis of HeLa cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

### PCNA Antibody (Center) - Background

PCNA is found in the nucleus and is a cofactor of DNA polymerase delta. This protein acts as a homotrimer and helps increase the processivity of leading strand synthesis during DNA replication. In response to DNA damage, this protein is ubiquitinated and is involved in the RAD6-dependent DNA repair pathway.

### PCNA Antibody (Center) - References

- Wang, Y., J. Cell. Biochem. 106 (3), 409-413 (2009)
- Maga, G., Proc. Natl. Acad. Sci. U.S.A. 105 (52), 20689-20694 (2008)
- Acharya, N., Proc. Natl. Acad. Sci. U.S.A. 105 (46), 17724-17729 (2008)

### PCNA Antibody (Center) - Citations

- [Effects of secreted frizzled-related protein 1 on proliferation, migration, invasion, and apoptosis of colorectal cancer cells.](#)