

**PCNA Antibody**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AM8545b**

**Specification**

**PCNA Antibody - Product Information**

|                   |                              |
|-------------------|------------------------------|
| Application       | <b>WB, IHC, IHC-P, FC, E</b> |
| Primary Accession | <a href="#">P12004</a>       |
| Other Accession   | <a href="#">P61258</a>       |
| Reactivity        | <b>Human</b>                 |
| Host              | <b>Mouse</b>                 |
| Clonality         | <b>monoclonal</b>            |
| Isotype           | <b>IgG1, k</b>               |
| Calculated MW     | <b>28769</b>                 |

**PCNA Antibody - Additional Information**

**Gene ID** 5111

**Other Names**

Proliferating cell nuclear antigen, PCNA, Cyclin, PCNA

**Target/Specificity**

This PCNA antibody is generated from a mouse immunized with a recombinant protein of human PCNA.

**Dilution**

WB~~1:2000  
IHC~~1:2000  
IHC-P~~1:25  
FC~~1:25

**Format**

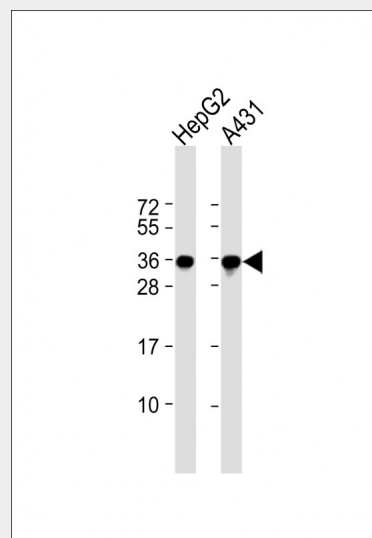
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

**Storage**

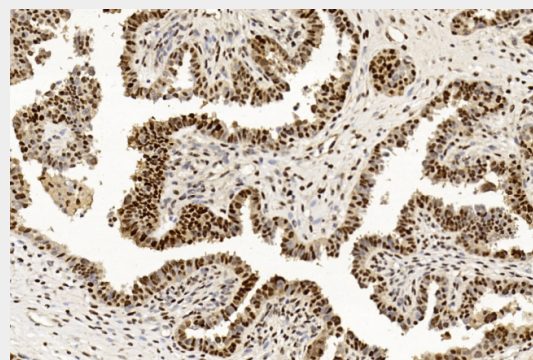
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

PCNA Antibody is for research use only and not for use in diagnostic or therapeutic procedures.



All lanes : Anti-PCNA Antibody at 1:2000 dilution Lane 1: HepG2 whole cell lysate Lane 2: A431 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 29 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Immunohistochemical analysis of paraffin-embedded Human Ovarian cancer section using Pink1 (Cat#AM8545b). AM8545b was diluted at 1:2000 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

## PCNA Antibody - Protein Information

### Name PCNA

### Function

Auxiliary protein of DNA polymerase delta and is involved in the control of eukaryotic DNA replication by increasing the polymerase's processivity during elongation of the leading strand. 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>).

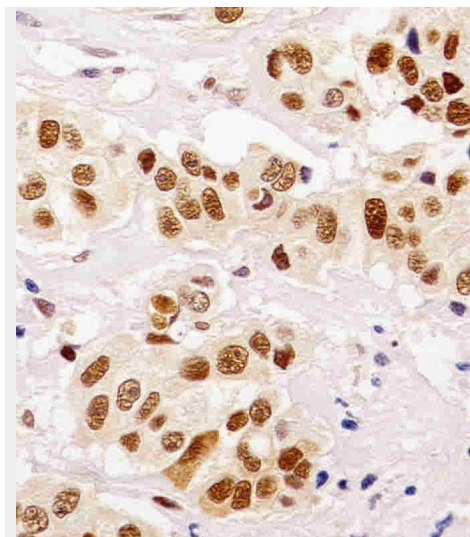
### Cellular Location

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. Together with APEX2, is redistributed in discrete nuclear foci in presence of oxidative DNA damaging agents

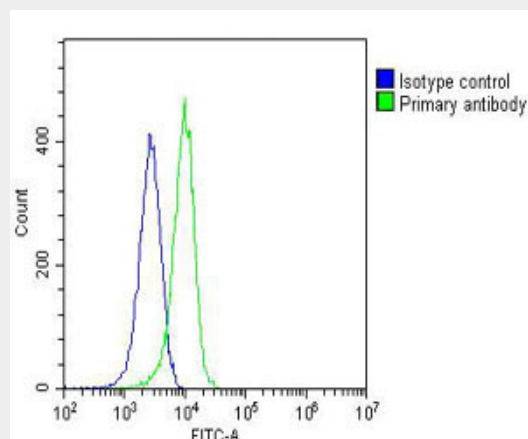
## PCNA Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)



AM8545b staining PCNA in human breast carcinoma tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Overlay histogram showing HeLa cells stained with AM8545b (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AM8545b, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly

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

Cross-Adsorbed(OJ192088) at 1/200 dilution for 40 min at 37°C. Isotype control antibody (blue line) was mouse IgG1 (1µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >10, 000 events was performed.

### PCNA Antibody - Background

Auxiliary protein of DNA polymerase delta and is involved in the control of eukaryotic DNA replication by increasing the polymerase's processibility during elongation of the leading strand. Induces a robust stimulatory effect on the 3'- 5' exonuclease and 3'-phosphodiesterase, but not apurinic-aprimidinic (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. 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.

### PCNA Antibody - References

Almendral J.M.,et al.Proc. Natl. Acad. Sci. U.S.A. 84:1575-1579(1987).  
Travali S.,et al.J. Biol. Chem. 264:7466-7472(1989).  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Deloukas P.,et al.Nature 414:865-871(2001).  
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

### PCNA Antibody - Citations

- [Circ\\_0046599 Promotes the Development of Hepatocellular Carcinoma by Regulating the miR-1258/RPN2 Network](#)