

**PCNA Antibody**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AP52805**

**Specification**

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**PCNA Antibody - Product Information**

Application	IP, WB, IHC, ICC
Primary Accession	<a href="#">P12004</a>
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Calculated MW	36 KDa

**PCNA Antibody - Additional Information**

**Gene ID** 5111

**Other Names**

Cyclin;DNA polymerase delta auxiliary protein;HGCN8729;MGC8367;Mutagen-sensitive 209 protein ;OTTHUMP00000030189;OTTHUMP00000030190;PCNA;Pcna/cyclin;PCNA\_HUMAN;PCNAR;Polymerase delta accessory protein;Proliferating Cell Nuclear Antigen.

**Dilution**

IP~~1:500  
WB~~1:1000  
IHC~~1:100  
ICC~~1:100

**Format**

Purified mouse monoclonal in PBS(pH 7.4) containing with 0.09% (W/V) sodium azide and 50% glycerol.

**Storage**

Store at -20 °C.Stable for 12 months from date of receipt

**PCNA Antibody - 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

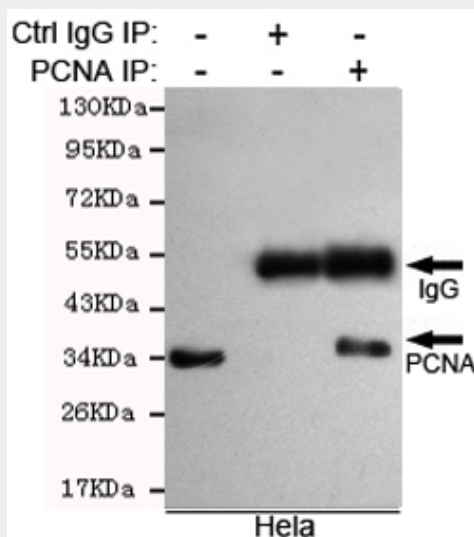
Nucleus Note=Colocalizes with CREBBP, EP300 and POLD1 to sites of DNA damage (PubMed:24939902). Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase (PubMed:15543136). Co-localizes with SMARCA5/SNF2H and BAZ1B/WSTF at replication foci during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

### PCNA Antibody - Protocols

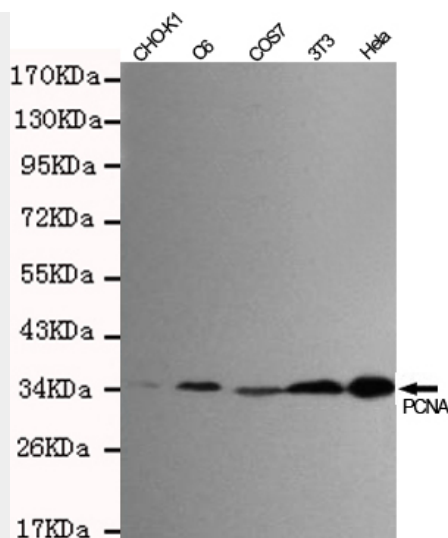
Provided below are standard protocols that you may find useful for product applications.

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

### PCNA Antibody - Images



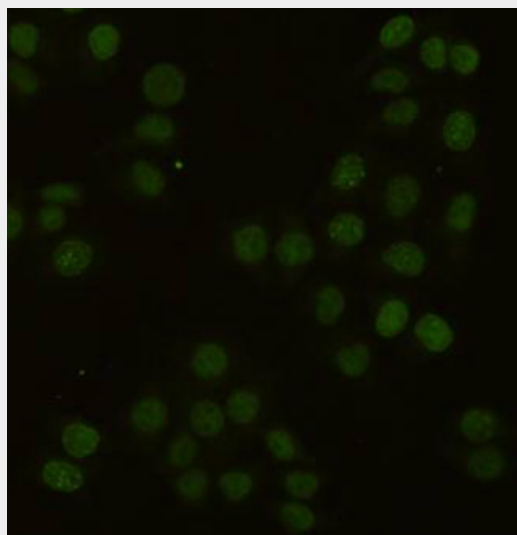
Immunoprecipitation analysis of HeLa cell lysates using PCNA mouse mAb.



Western blot detection of PCNA in HeLa,3T3,COS7,C6 and CHO-K1 cell lysates using PCNA mouse mAb (1:1000 diluted).Predicted band size:36KDa.Observed band size:36KDa.



Immunohistochemical analysis of paraffin-embedded human colorectal carcinoma with PCNA mouse mAb (2E1-G10-H10,1:400 diluted),showing nuclear localization.A high pressure mediated antigen retrieval step was performed in citrate buffer(pH6.0).



Immunocytochemistry staining of HeLa cells using PCNA mouse mAb (dilution 1:100). Fixed in 100% methanol for 2hr at -20°C.

### **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- 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. 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.