10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PCNA Antibody (C-term)
Mouse Monoclonal Antibody (Mab)
Catalog # AW5198

Specification

PCNA Antibody (C-term) - Product Information

Application	**WB, IHC,E**
Primary Accession	P12004
Other Accession	P04961, P61258, P57761, Q3ZBW4
Reactivity	**Human, Mouse**
Predicted	**Bovine, Hamster, Monkey, Rat**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**H=29;M=29;Rat=29 KDa**
Isotype	**IgG1**
Antigen Source	**Human**

PCNA Antibody (C-term) - Additional Information

Gene ID 5111

Antigen Region
236-261

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

Dilution
WB~~1:3000
IHC~~1:25

Target/Specificity
This PCNA antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 236-261 amino acids from the C-terminal region of human PCNA.

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 (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

PCNA Antibody (C-term) - 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:35585232). 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:24939902). 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:24695737).

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 (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PCNA Antibody (C-term) - Images

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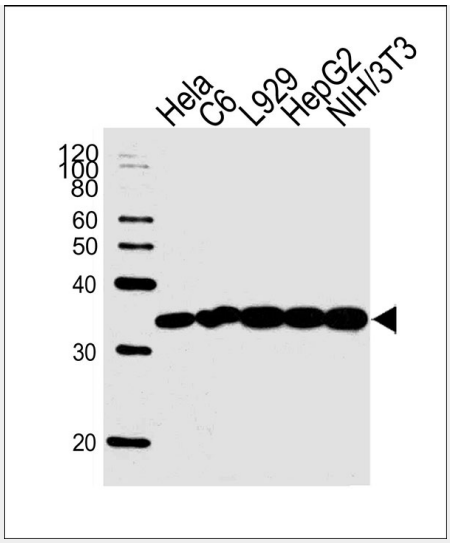
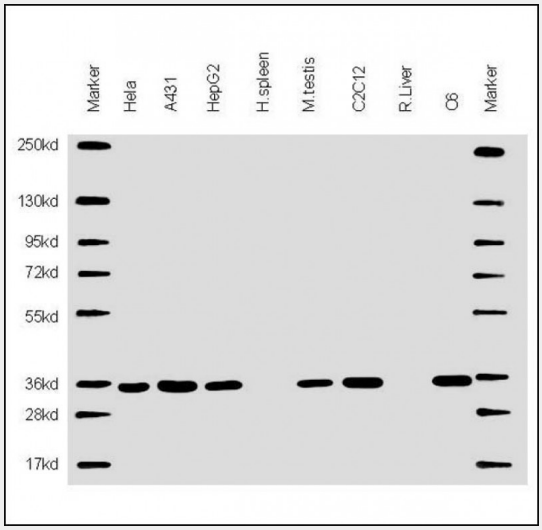


Western blot analysis of lysates from Hela,rat C6,L929,HepG2,mouse NIH/3T3 cell line (from left to right), using PCNA Antibody (C-term)(Cat. #AW5198). AW5198 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.Lysates at 20ug per lane.



All lanes : Anti-PCNA Antibody (C-term) at1:3000 dilution Lane 1: Hela whole cell lysate Lane 2: A431 whole cell lysate Lane 3: HepG2 whole cell lysate Lane 4: human spleen lysate Lane 5: mouse Testis lysate Lane 6: C2C12 whole cell lysate Lane 7: rat Liver lysate Lane 8: C6 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 : 36 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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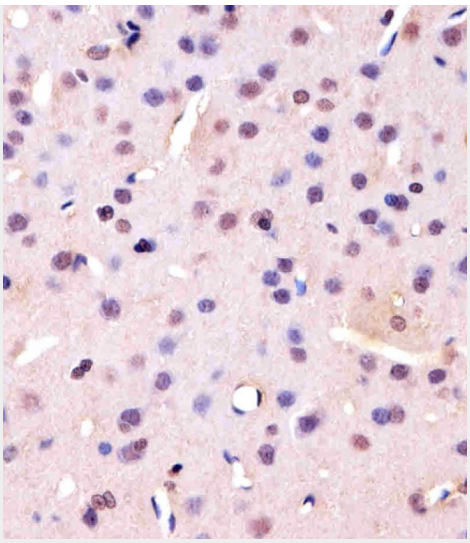

AM2237b staining PCNA in Rat brain tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples 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.

PCNA Antibody (C-term) - Background

This protein is an 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.

PCNA Antibody (C-term) - 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.