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

PCNA Antibody (C-term) [Knockout Validated]

Mouse Monoclonal Antibody (Mab)
Catalog # AM2237b

Specification

PCNA Antibody (C-term) [Knockout Validated] - Product Information

Application	**WB, IHC-P,E**
Primary Accession	P12004
Other Accession	P04961, P61258, P57761, Q3ZBW4
Reactivity	**Human, Mouse, Rat**
Predicted	**Bovine, Hamster, Monkey**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**28769**
Antigen Region	**236-261**

PCNA Antibody (C-term) [Knockout Validated] - Additional Information

Gene ID 5111

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

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.

Dilution
WB~~1:2000
IHC-P~~1:25
E~~Use at an assay dependent concentration.

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) [Knockout Validated] is for research use only and not for use in diagnostic or therapeutic procedures.

PCNA Antibody (C-term) [Knockout Validated] - 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).

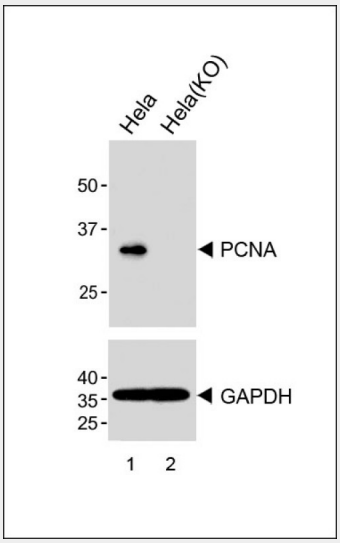
Cellular Location
Nucleus. Note=Colocalizes with CREBBP, EP300 and POLD1 to sites of DNA damage (PubMed:24939902). Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase (PubMed:15543136). Co-localizes with SMARCA5/SNF2H and BAZ1B/WSTF at replication 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) [Knockout Validated] - 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

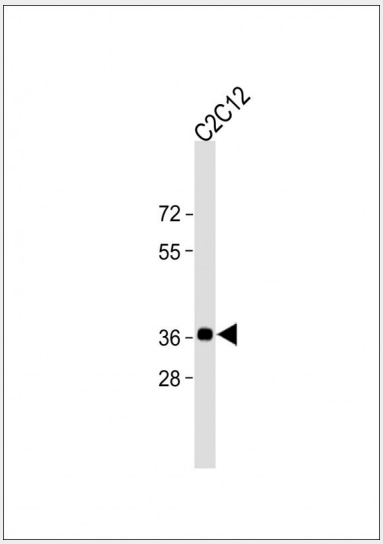
PCNA Antibody (C-term) [Knockout Validated] - Images



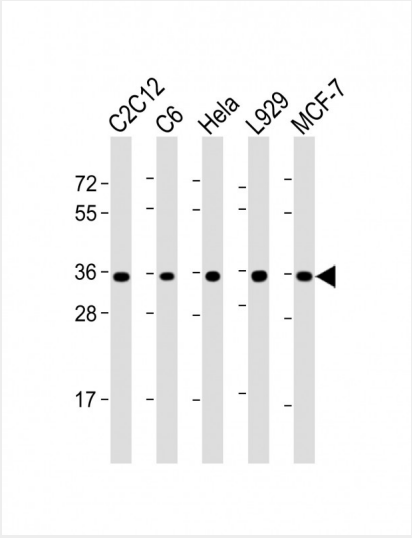
All lanes : Anti-PCNA Antibody (C-term) at 1:1000 dilution (upper) Lane 1: Hela Lane 2: Hela-Knockout Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L),

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

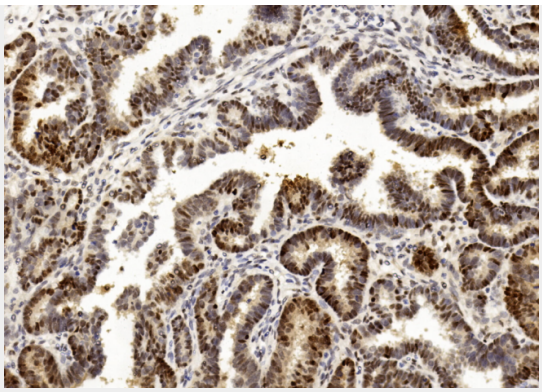
Peroxidase conjugated (ASP1613) at 1/8000 dilution. Predicted band size : 34 kDa



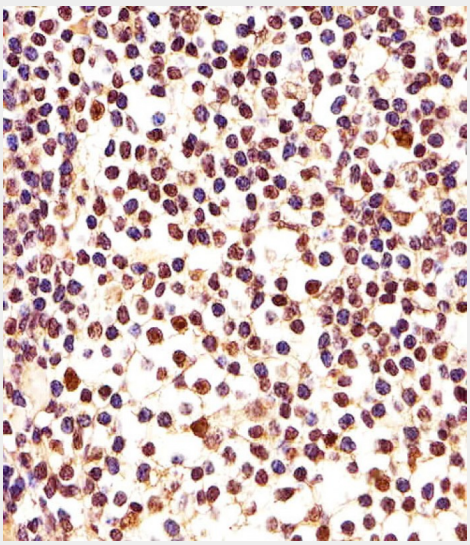
All lanes: Anti-PCNA Antibody (C-term) at 1:2000 dilution + C2C12 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 34KDa Blocking/Dilution buffer: 5% NFDM/TBST.



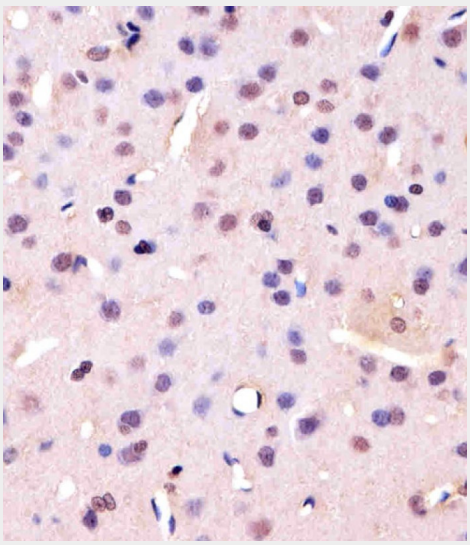
All lanes : Anti-PCNA Antibody (C-term) at 1:2000 dilution Lane 1: C2C12 whole cell lysate Lane 2: C6 whole cell lysate Lane 3: Hela whole cell lysate Lane 4: L929 whole cell lysate Lane 5: MCF-7 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated 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#AM2237b). AM2237b was diluted at 1:2000 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



Immunohistochemical analysis of paraffin-embedded H. lymph section using PCNA Antibody (C-term)(Cat#AM2237B). AM2237B was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



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) [Knockout Validated] - 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) [Knockout Validated] - 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.