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

Product Information

Application	WB, IHC-P, E
Primary Accession	P12004
Reactivity	Human, Mouse, Rat
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	1157CT1.1.3
Calculated MW	28769
Antigen Region	236-261

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~~1:100~500 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.

Protein Information

Name	PCNA
Function	Confers DNA tethering and processivity to DNA polymerases and other proteins (PubMed:24695737, PubMed:24939902, PubMed:35585232). Auxiliary protein of DNA polymerase delta and epsilon, is involved in the control of DNA replication by increasing the polymerases' processivity 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

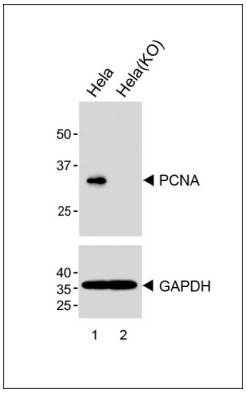
Background

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.

References

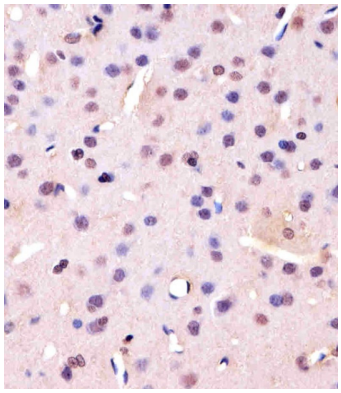
Almendral J.M., et al. Proc. Natl. Acad. Sci. U.S.A. 84:1575-1579(1987).
Travali S., et al. J. Biol. Chem. 264:7466-7472(1989).
Ota T., et al. Nat. Genet. 36:40-45(2004).
Deloukas P., et al. Nature 414:865-871(2001).
Mural R.J., et al. Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

Images

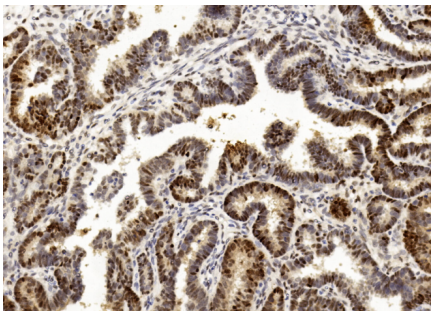


All lanes : Anti-PCNA Antibody (C-term) at 1:1000 dilution (upper) Lane 1: Hela Lane 2: Hela-Knockout Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated (ASP1613) at 1/8000 dilution. Predicted band size : 34 kDa

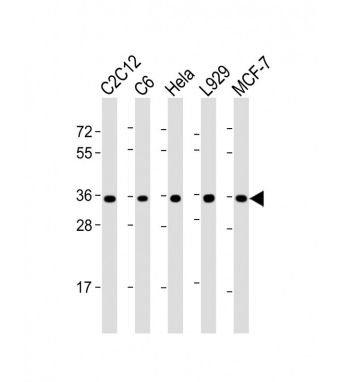
AM2237b staining PCNA in Rat brain tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at



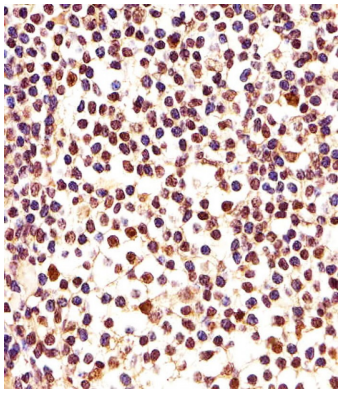
room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



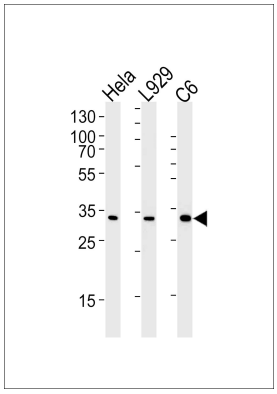
Immunohistochemical analysis of paraffin-embedded Human Ovarian cancer section using Pink1(Cat#AM2237b). AM2237b was diluted at 1:2000 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



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 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.



PCNA Antibody (C-term) (Cat. #AM2237b) western blot analysis in Hela,mouse L929 and rat C6 cell line lysates (35µg/lane).This demonstrates the PCNA antibody detected the PCNA protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.