

For Research Use Only

# PCNA Monoclonal antibody

Catalog Number: 60097-1-Ig

Featured Product

161 Publications



## Basic Information

**Catalog Number:**

60097-1-Ig

**Concentration:**

500 ug/ml

**Source:**

Mouse

**Isotype:**

IgG1

**Immunogen Catalog Number:**

AG7416

**GenBank Accession Number:**

BC000491

**GeneID (NCBI):**

5111

**UNIPROT ID:**

P12004

**Full Name:**

proliferating cell nuclear antigen

**Calculated MW:**

29 kDa/31 kDa

**Observed MW:**

36-38 kDa

**Purification Method:**

Protein G purification

**CloneNo.:**

10D10E11

**Recommended Dilutions:**

WB 1:5000-1:50000

IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC 1:500-1:2000

IF/ICC 1:250-1:1000

## Applications

**Tested Applications:**

WB, IHC, IF/ICC, IP, ELISA

**Cited Applications:**

WB, IHC, IF, IP, CoIP

**Species Specificity:**

human, mouse, rat, pig

**Cited Species:**

human, mouse, rat, pig, rabbit, zebrafish

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

**Positive Controls:**

**WB:** HEK-293 cells, HepG2 cells, HeLa cells, Jurkat cells, K-562 cells, C6 cells, ROS1728 cells, NIH/3T3 cells, 3T3-L1 cells, 4T1 cells, RAW 264.7 cells

**IP:** HepG2 cells,

**IHC:** human gliomas tissue, human breast cancer tissue, human liver cancer tissue, human placenta tissue, human tonsillitis tissue, mouse ovary tissue

**IF/ICC:** HepG2 cells, mouse heart tissue

## Background Information

Proliferating Cell Nuclear Antigen, commonly known as PCNA, is a protein that acts as a processivity factor for DNA polymerase  $\delta$  in eukaryotic cells. 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. PCNA induces a robust stimulatory effect on the 3'-5' exonuclease and 3'-phosphodiesterase, but not apurinic-apyrimidinic (AP) endonuclease, APEX2 activities. It has to be loaded onto DNA in order to be able to stimulate APEX2. PCNA protein is highly conserved during evolution; the deduced amino acid sequences of rat and human differ by only 4 of 261 amino acids. PCNA has been used as loading control for proliferating cells. The calculated molecular weight of PCNA is 29 kDa, but modified PCNA is 36kDa (PMID: 1358458).

## Notable Publications

Author	Pubmed ID	Journal	Application
Qingrong Zhang	34655915	Colloids Surf B Biointerfaces	WB,IHC
Kazuki Miura	36188330	ACS Omega	WB
Fei Han	29104493	Int J Biol Sci	WB,IHC

## Storage

**Storage:**

Store at -20°C. Stable for one year after shipment.

**Storage Buffer:**

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:

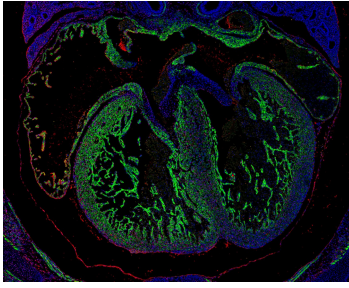
T: 4006900926

E: Proteintech-CN@ptglab.com

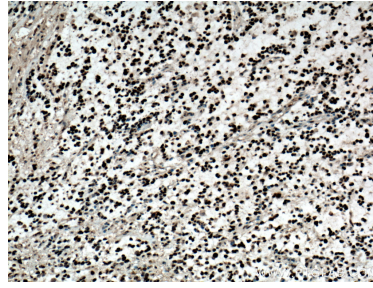
W: ptgcn.com

**This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.**

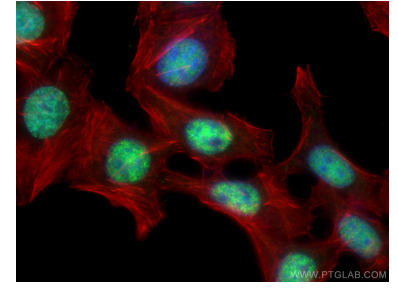
## Selected Validation Data



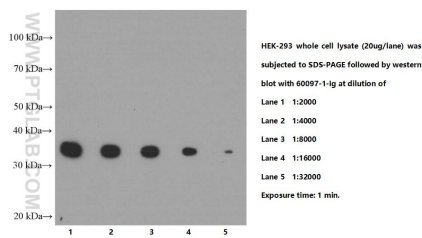
E14.5 FFPE mouse heart stained for Desmin (green, Cat. No CL488-16520) and PCNA (red, Cat. No 60097-1-Ig). Desmin was conjugated to CoraLite-488 fluorescent dye and stains cardiomyocytes (heart muscle cells). PCNA stains proliferating cells, which are numerous in the developing heart. In this image, the four chambers of the heart can be easily visualized. Image credit: @Immunofluorescence on Instagram.



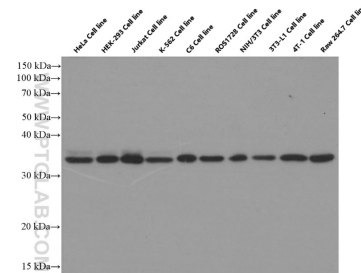
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 60097-1-Ig (PCNA antibody) at dilution of 1:1000 (under 10x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



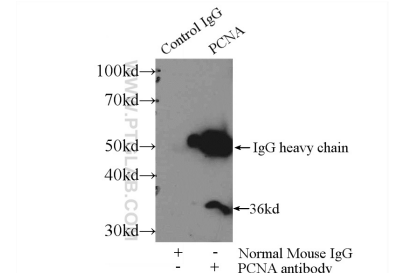
Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using 60097-1-Ig (PCNA antibody), at dilution of 1:200 and CoraLite@488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).



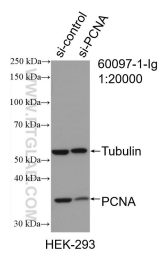
HEK-293 cells were subjected to SDS PAGE followed by western blot with 60097-1-Ig (PCNA Antibody) at various dilution incubated at room temperature for 1.5 hours.



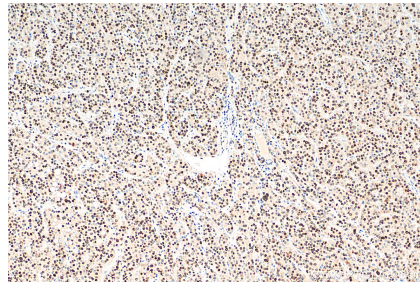
Western blot analysis of PCNA in various cell lines using Proteintech antibody 60097-1-Ig at a dilution of 1:10000 (exposed for 2 seconds) incubated at room temperature for 1.5 hours.



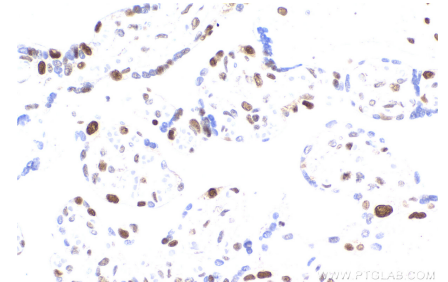
IP result of anti-PCNA (IP:60097-1-Ig, 4ug; Detection:60097-1-Ig 1:300) with HepG2 cells lysate 3000ug.



WB result of PCNA antibody (60097-1-Ig; 1:20000; incubated at room temperature for 1.5 hours) with sh-Control and sh-PCNA transfected HEK-293 cells.



Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 60097-1-Ig (PCNA antibody) at dilution of 1:2000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human placenta tissue slide using 60097-1-Ig (PCNA antibody) at dilution of 1:16000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).