

PCNA Monoclonal antibody

Catalog Number: 60097-1-Ig

Featured Product

115 Publications

Basic Information

Catalog Number:

60097-1-Ig

Size:

150ul , Concentration: 500 µg/ml by Nanodrop;

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 1:250-1:1000

Applications

Tested Applications:

WB, IP, IF, FC, IHC, ELISA

Cited Applications:

WB, IP, IF, IHC

Species Specificity:

human, mouse, pig, rat

Cited Species:

human, rat, mouse, rabbit, zebrafish, pig

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 liver cancer tissue, human breast cancer tissue, mouse ovary tissue, human tonsillitis tissue

IF : 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 δ 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 pH 7.3.

Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

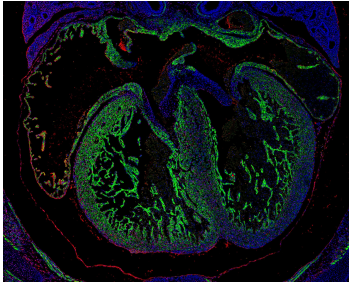
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

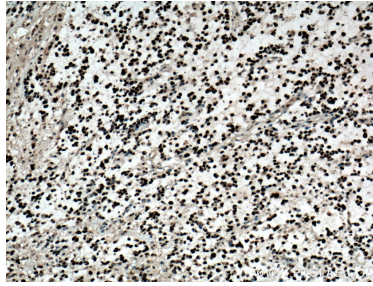
E: proteintech@ptglab.com
W: ptglab.com

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

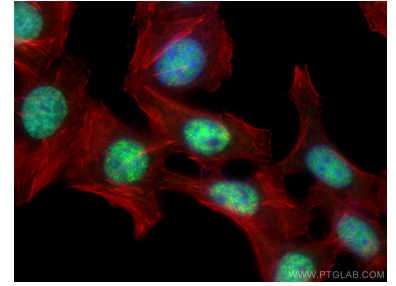
Selected Validation Data



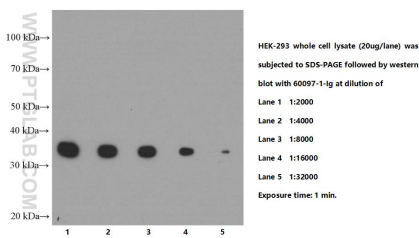
E14.5 FFPE mouse heart stained for Desmin (green, Cat. No CL488-16520) and PCNA (red, Cat. No 60097-1-Ig). Desmin was conjugated to CoraLite-488 fluorescent dye and stains cardiomyocytes (heart muscle cells). PCNA stains proliferating cells, which are numerous in the developing heart. In this image,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



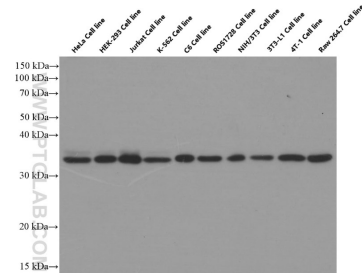
Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 60097-1-Ig (PCNA antibody) at dilution of 1:1000 (under 10x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



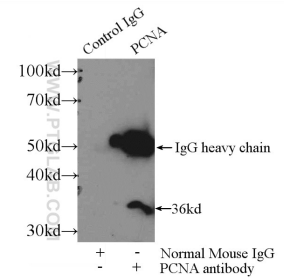
Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using 60097-1-Ig (PCNA antibody), at dilution of 1:200 and CoraLite@488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).



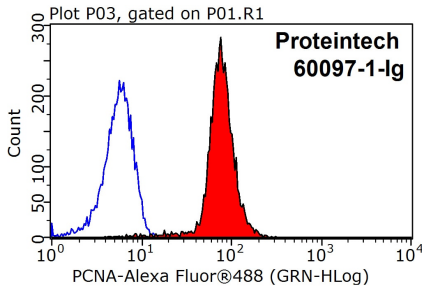
HEK-293 cells were subjected to SDS PAGE followed by western blot with 60097-1-Ig (PCNA Antibody) at various dilution incubated at room temperature for 1.5 hours.



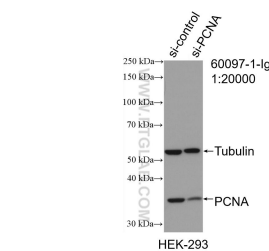
Western blot analysis of PCNA in various cell lines using Proteintech antibody 60097-1-Ig at a dilution of 1:10000 (exposed for 2 seconds) incubated at room temperature for 1.5 hours.



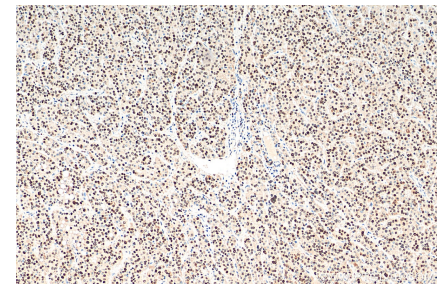
IP result of anti-PCNA (IP:60097-1-Ig, 4ug; Detection:60097-1-Ig 1:300) with HepG2 cells lysate 3000ug.



1X10⁶ MCF-7 cells were stained with 0.2ug PCNA antibody (60097-1-Ig, red) and control antibody (blue). Fixed with 90% MeOH blocked with 3% BSA (30 min). Alexa Fluor 488-conjugated AffiniPure Goat Anti-Mouse IgG(H+L) with dilution 1:1500.



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).