

PCNA, Biotinylated
Peptide-affinity purified goat antibody
Catalog # AF3816b**Specification**

PCNA, Biotinylated - Product Information

Application	WB, Pep-ELISA
Primary Accession	P12004
Other Accession	NP_002583.1 , 5111 , 18538 (mouse) , 25737 (rat)
Reactivity	Human, Mouse, Rat
Predicted	Pig, Dog
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	28769

PCNA, Biotinylated - Additional Information**Gene ID** 5111**Other Names**

Proliferating cell nuclear antigen, PCNA, Cyclin, PCNA

Dilution

WB~~1:1000

Pep-ELISA~~N/A

Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

PCNA, Biotinylated is for research use only and not for use in diagnostic or therapeutic procedures.

PCNA, Biotinylated - 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

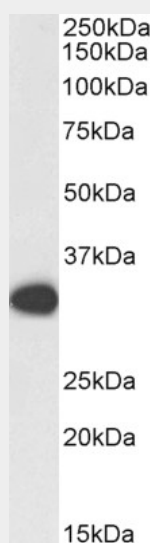
Nucleus. Note=Colocalizes with CREBBP, EP300 and POLD1 to sites of DNA damage (PubMed:24939902). Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase (PubMed:15543136). Co-localizes with SMARCA5/SNF2H and BAZ1B/WSTF at replication foci during S phase (PubMed:15543136). Together with APEX2, is redistributed in discrete nuclear foci in presence of oxidative DNA damaging agents

PCNA, Biotinylated - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

PCNA, Biotinylated - Images



Biotinylated EB11650 (1µg/ml) staining of HeLa lysate (35µg protein in RIPA buffer), exactly mirroring its parental non-biotinylated product. Primary incubation was 1 hour. Detected by chemiluminescence, using streptavidin-HRP and using NAP blocker as a s

PCNA, Biotinylated - Background

Reported variants represent identical protein: NP_872590.1, NP_002583.1

PCNA, Biotinylated - References

Dysregulation of DNA polymerase γ recruitment to replication forks results in genomic instability.
Jones MJ, Colnaghi L, Huang TT. EMBO J. 2011 Dec 13. PMID: 22157819