

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

---

**PCNA, Biotinylated - Product Information**

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

**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**

Confers DNA tethering and processivity to DNA polymerases and other proteins (PubMed:&lt;a href="http://www.uniprot.org/citations/24695737" target="\_blank"&gt;24695737&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/24939902" target="\_blank"&gt;24939902&lt;/a&gt;, PubMed:&lt;a

[35585232](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/24695737)).

### Cellular Location

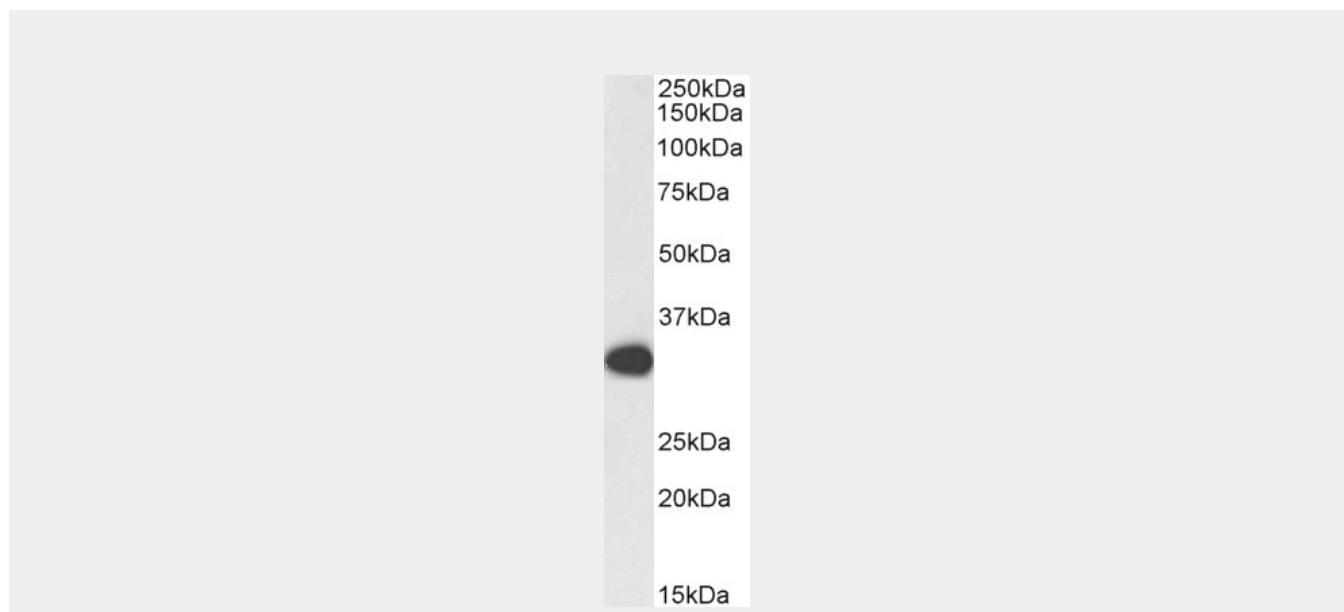
Nucleus. Note=Colocalizes with CREBBP, EP300 and POLD1 to sites of DNA damage (PubMed:24939902). Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase (PubMed:15543136). Co-localizes with SMARCA5/SNF2H and BAZ1B/WSTF at replication foci during 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  $\gamma$  recruitment to replication forks results in genomic instability.  
Jones MJ, Colnaghi L, Huang TT. EMBO J. 2011 Dec 13. PMID: 22157819