

**PCNA Antibody (internal region)**  
Peptide-affinity purified goat antibody  
Catalog # AF3816a

### Specification

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#### PCNA Antibody (internal region) - Product Information

Application	WB, IHC
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	Human, Mouse, Rat
Predicted	Pig, Dog
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	28769

#### PCNA Antibody (internal region) - Additional Information

**Gene ID** 5111

#### Other Names

Proliferating cell nuclear antigen, PCNA, Cyclin, PCNA

#### 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 Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

#### PCNA Antibody (internal region) - 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:<a href="http://www.uniprot.org/citations/35585232" target="\_blank">35585232</a>). 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:<a href="http://www.uniprot.org/citations/24939902" target="\_blank">24939902</a>). 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:<a href="http://www.uniprot.org/citations/24695737" target="\_blank">24695737</a>).

#### Cellular Location

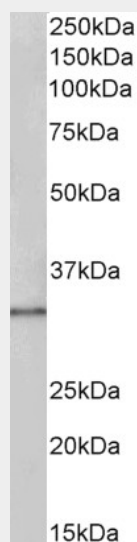
Nucleus. Note=Colocalizes with CREBBP, EP300 and POLD1 to sites of DNA damage (PubMed:24939902). Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase (PubMed:15543136). Co-localizes with SMARCA5/SNF2H and BAZ1B/WSTF at replication foci during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

#### PCNA Antibody (internal region) - Protocols

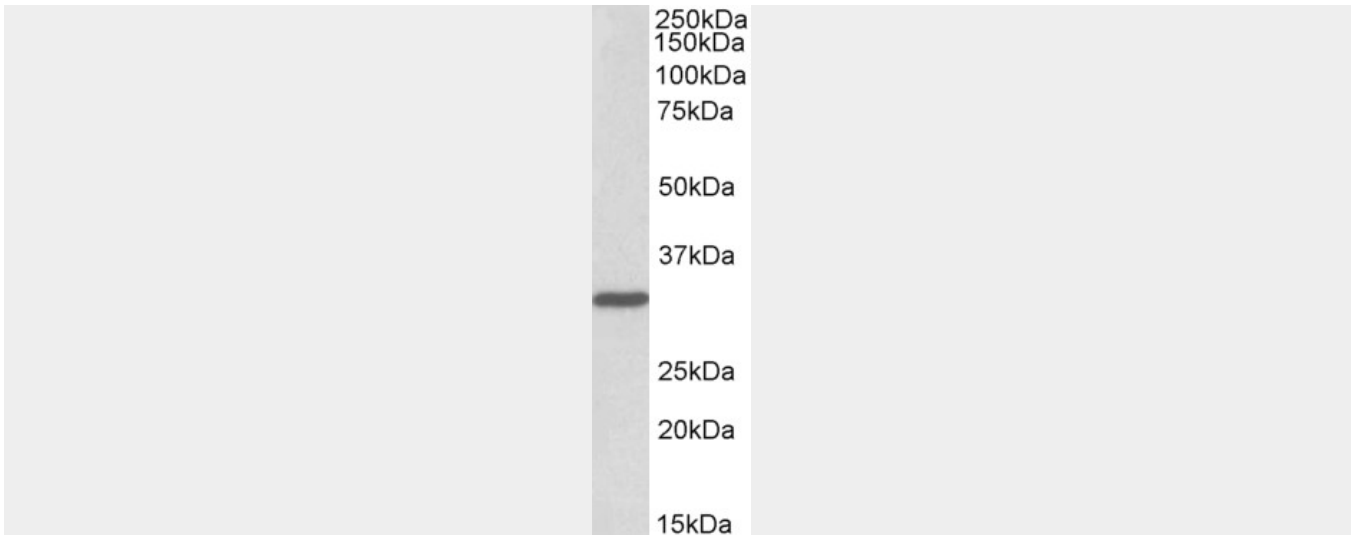
Provided below are standard protocols that you may find useful for product applications.

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

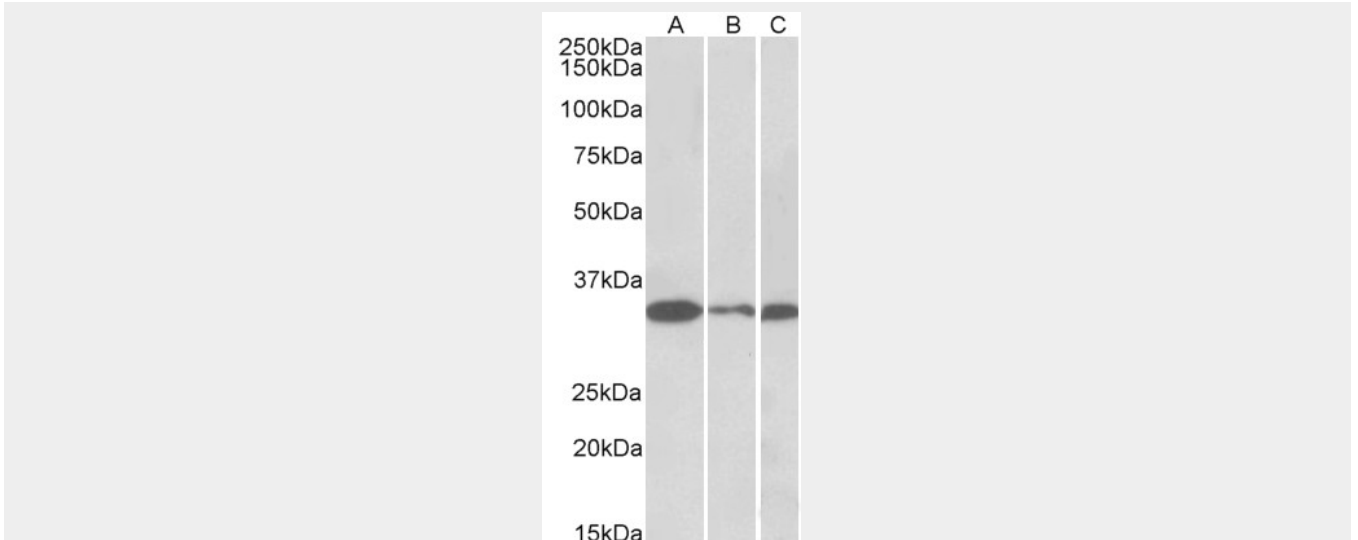
#### PCNA Antibody (internal region) - Images



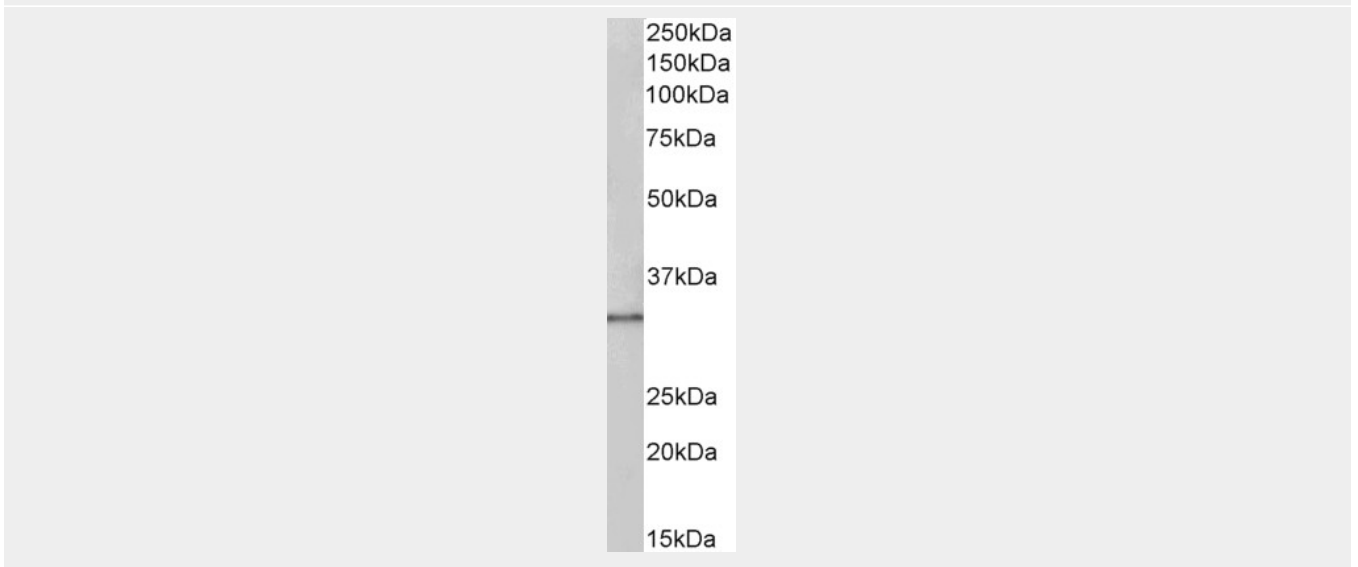
AF3816a (0.03 $\mu$ g/ml) staining of Pig Spleen lysate (35 $\mu$ g protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



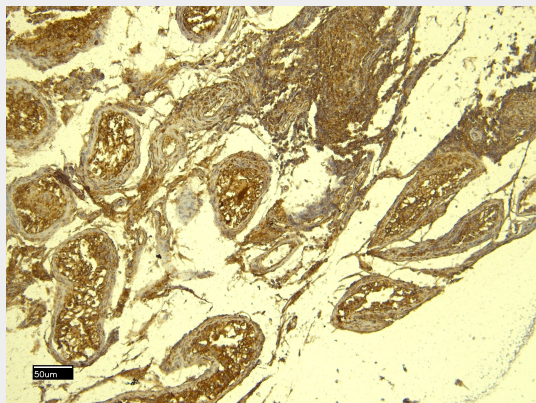
EB11650 (0.01 $\mu$ g/ml) staining of HeLa lysate (35 $\mu$ g protein in RIPA buffer). Detected by chemiluminescence.



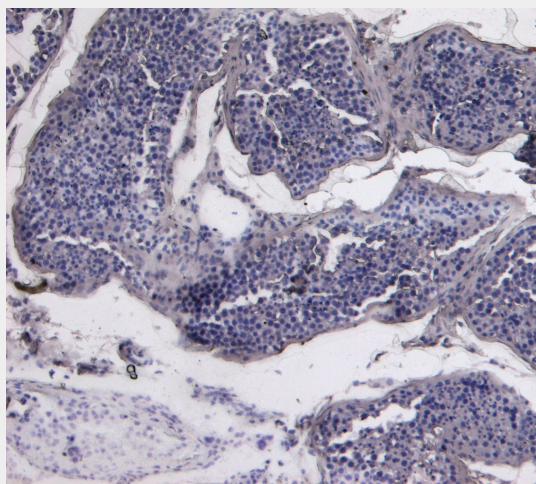
EB11650 (0.01 $\mu$ g/ml) staining of NIH3T3 (A), Mouse Testis (B) and Rat Testis (C) lysates (35 $\mu$ g protein in RIPA buffer). Detected by chemiluminescence.



EB11650 (0.03 $\mu$ g/ml) staining of Pig Spleen lysate (35 $\mu$ g protein in RIPA buffer). Detected by chemiluminescence.



EB11650 (6 $\mu$ g/ml) staining of paraffin embedded Human Testis. Heat induced antigen retrieval with citrate buffer pH 6, HRP-staining.



EB11650 Negative Control showing staining of paraffin embedded Human Testis, with no primary antibody.

#### **PCNA Antibody (internal region) - Background**

Reported variants represent identical protein: NP\_872590.1, NP\_002583.1

#### **PCNA Antibody (internal region) - 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