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

Specification

PCNA Antibody (internal region) - 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 Antibody (internal region) - 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 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: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 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 Cytomety
- Cell Culture

PCNA Antibody (internal region) - Images

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

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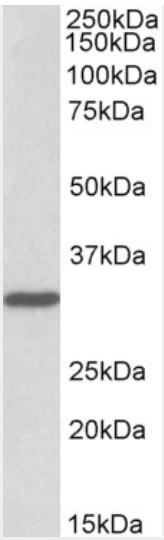
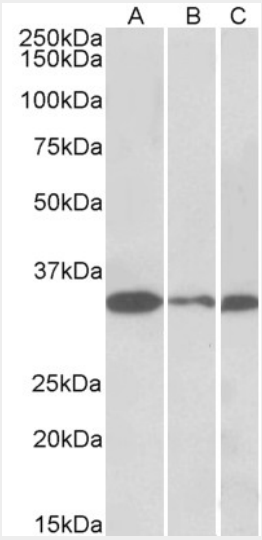


EB11650 (0.01µg/ml) staining of HeLa lysate (35µg protein in RIPA buffer). Detected by chemiluminescence.



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

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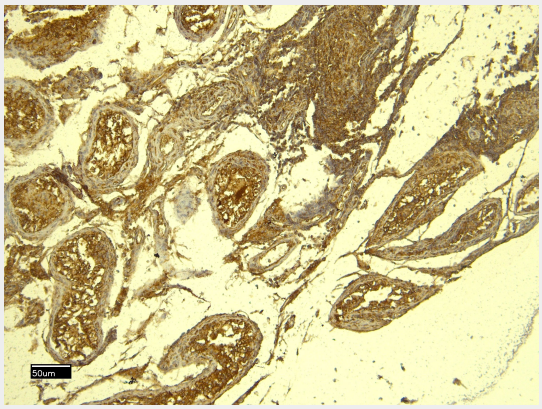
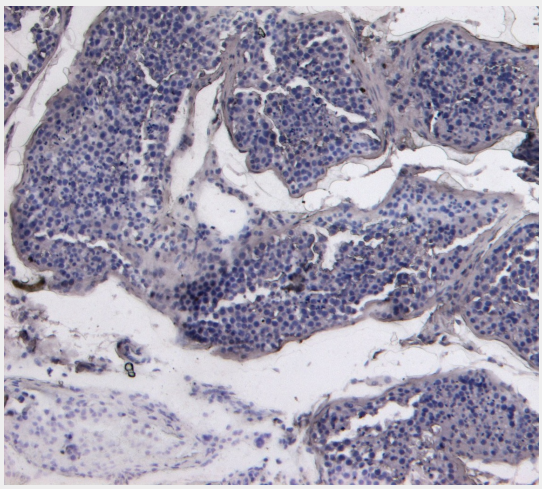
EB11650 (0.03µg/ml) staining of Pig Spleen lysate (35µg protein in RIPA buffer). Detected by chemiluminescence.



EB11650 (6µg/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 ? recruitment to replication forks results in genomic instability. Jones MJ, Colnaghi L, Huang TT. EMBO J. 2011 Dec 13. PMID: 22157819