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PCNA, Biotinylated

Peptide-affinity purified goat antibody
Catalog # AF3816b

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
Isotype	IgG
Calculated MW	28769

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.

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

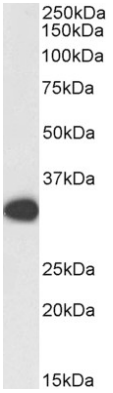
Background

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

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

Images



Biotinylated EB11650 (1 µg/ml) staining of HeLa lysate (35 µg 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