10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-PCNA Antibody (clone 1G7)

Mouse Anti Human Monoclonal Antibody
Catalog # ALS18182

Product Information

Application	WB, IHC-P, IF, E, IP
Primary Accession	P12004
Predicted	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a,k
Clone Names	1G7
Calculated MW	28769
Concentration (mg/ml)	0.5 mg/ml

Additional Information

Gene ID	5111
Alias Symbol	PCNA
Other Names	PCNA, Cyclin
Target/Specificity	Human PCNA / Cyclin
Reconstitution & Storage	Protein A purified
Precautions	Anti-PCNA Antibody (clone 1G7) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PCNA
Function	Confers DNA tethering and processivity to DNA polymerases and other proteins (PubMed:24695737, PubMed:24939902, PubMed: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). 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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.