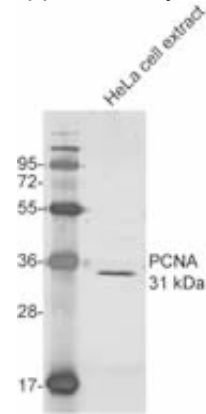


PCNA antibody [16D10]

Description	Rat monoclonal [16D10] to PCNA. Proliferation Marker
Product Type	Primary antibody
Reacts with	Human, Mouse, Rat, Hamster
Predicted to react	Cow, Dog, Sheep (Due to sequence homology)
Isotype	IgG2b
Relevance	<p>Proliferating cell nuclear antigen (PCNA) is a homotrimeric ring-shaped protein that encircles the DNA and acts as a stationary loading platform for multiple, transiently interacting partners participating in various DNA transactions. This essential cellular component, originally characterized as a nuclear antigen of dividing cells, is evolutionary highly conserved from yeast to human. Within the eukaryotic cell, PCNA plays a key role in DNA replication, repair, cell cycle regulation, and post-replicative transactions like DNA methylation and chromatin remodeling. All these cellular processes are regulated by a complex network comprising cell cycle dependent changes in expression levels, dynamics, interactions, and localization of PCNA.</p> <p>Here we offer the first rat monoclonal antibody (MAb) against human PCNA, designated as PCNA 16D10. PCNA 16D10 is highly affine and specific MAb suited for ELISA, immunoblotting, immunoprecipitation, and immunofluorescence. The characteristic punctate staining of S phase cells allows the identification of proliferating cells and the monitoring of cell cycle progression</p>
Cellular localization	Nuclear
Reference	<p>Rottach, A <i>et al.</i>, Generation and characterization of a rat monoclonal antibody specific for PCNA. <i>Hybridoma</i> (2008). PMID: 18642673</p> <p>Spada <i>et al.</i>, DNMT1 but not its interaction with the replication machinery is required for maintenance of DNA methylation in human cells. <i>JCB</i> (2007). PMID: 17312023</p> <p>Schermelleh <i>et al.</i>, Dynamics of Dnmt1 interaction with the replication machinery and its role in postreplicative maintenance of DNA methylation. <i>NAR</i> (2007). PMID: 17576694</p>
Form	Liquid; hybridoma supernatant. The hybridoma was cultured in protein free medium. Tissue culture supernatant was concentrated by centrifugation using a 30 kD exclusion membrane to an antibody concentration of 1 mg/ml.
Size	100 µg
Storage Buffer	Preservative: 0.01% Sodium Azide Material safety datasheet (MSDS) for this product: Sodium Azide MSDS
Concentration	1 mg/ml
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Store at +4°C short term (1-2 weeks). Avoid freeze / thaw cycles.

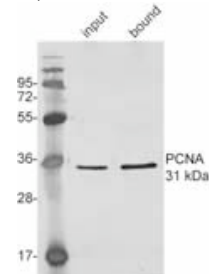
Tested Applications and Recommended Dilutions

Western Blot: Used at a dilution of 1/2000. Detects a band of approximately 31 kDa (predicted molecular weight PCNA: 31 kDa).



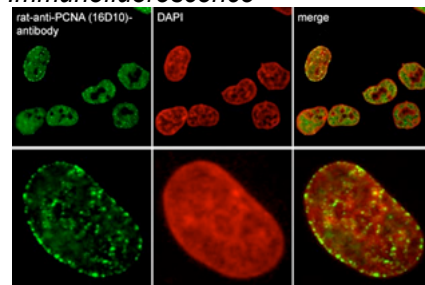
primary antibody: 0.1 µg of PCNA 16D10 incubation for 1 h at RT secondary antibody: anti-rat-HRP (Jackson ImmunoResearch Europe) detection with ECL Western Blot Detection Kit

IP, Co-IP



For immunoprecipitation, 2 µg of PCNA 16D10 antibody was used incubation for 1 h at RT

Immunofluorescence



HeLa cells 3,7% PFA fixed/ Methanol fixed. Used at a dilution of 1/2000. Secondary antibody: donkey-anti-rat-Alexa488 (1/400)

Not yet tested in other applications. Optimal dilutions/concentrations should be determined by the end user.

Only for research applications, not for diagnostic or therapeutic use.