

## Biotin anti-human/mouse/rat PCNA Antibody

<b>Catalog# / Size</b>	307904 / 100 µg
<b>Clone</b>	PC10
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Proliferating Cell Nuclear Antigen, DNA Polymerase δ Auxiliary Protein
<b>Isotype</b>	Mouse IgG2a, κ
<b>Description</b>	The PC10 monoclonal antibody reacts with proliferating cell nuclear antigen also known as PCNA or the DNA polymerase δ auxiliary protein. PCNA is a 36 kD trimeric ring that acts as a DNA-polymerase sliding clamp expressed in the nucleus of all proliferating cells. A prime function of PCNA appears to be increasing DNA polymerase δ processibility during elongation of the leading strand. PCNA is a useful marker for DNA synthesis and is highly conserved among most species, thus highlighting the very broad reactivity of this antibody.

### Product Details

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<b>Verified Reactivity</b>	Human, Mouse, Rat
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Recombinant rat PCNA
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions.
<b>Concentration</b>	0.5 mg/mL
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">ICFC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by immunofluorescent intracellular staining with flow cytometric analysis. Please follow the <a href="#">Cell Fixation and Permeabilization Protocol Using 70% Ethanol</a> . For flow cytometric staining, the suggested use of this reagent is ≤ 0.125 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	Additional reported applications (for the relevant formats) include: immunohistochemical staining <sup>2,5,6</sup> of acetone-fixed frozen sections and formalin-fixed paraffin-embedded tissue sections, immunoprecipitation, intracellular flow cytometry <sup>3</sup> , immunofluorescence microscopy <sup>9</sup> , and Western blotting <sup>10</sup> .

### Application References

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<b>Product Citations</b>	<ol style="list-style-type: none"> <li>1. Begolly S, <i>et al.</i> 2018. <i>Glia</i>. 66:846. <a href="#">PubMed</a></li> <li>2. Yan H, <i>et al.</i> 2019. <i>Sci Rep</i>. 9:10447. <a href="#">PubMed</a></li> <li>3. Dopeso H, <i>et al.</i> 2009. <i>Cancer Res</i>. 69:7430. <a href="#">PubMed</a></li> <li>4. Spector I, <i>et al.</i> 2012. <i>PLoS One</i>. 7:e41833. <a href="#">PubMed</a></li> <li>5. Kim J, <i>et al.</i> 2012. <i>Immunol Lett</i>. 147:18. <a href="#">PubMed</a></li> <li>6. Satchi-Fainaro R, <i>et al.</i> 2012. <i>PLoS One</i>. 7:e44395. <a href="#">PubMed</a></li> </ol>
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**RRID** AB\_314694 (BioLegend Cat. No. 307904)

## Antigen Details

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<b>Structure</b>	DNA-polymerase sliding clamp, trimeric ring; 36 kD
<b>Distribution</b>	Nuclear, all proliferating cells
<b>Function</b>	RAD6-dependent DNA repair pathway; increases DNA polymerase $\delta$ processibility during elongation of the leading strand
<b>Interaction</b>	PCNA, DNA polymerase $\delta$ , Rad6, Rad18, UBC9, MMS2, UBC13, RAD5
<b>Ligand/Receptor</b>	Ubiquitination, Sumoylation
<b>Cell Type</b>	Neural Stem Cells
<b>Biology Area</b>	Cell Biology, Cell Cycle/DNA Replication, DNA Repair/Replication, Immunology, Neuroscience, Neuroscience Cell Markers, Stem Cells
<b>Molecular Family</b>	Nuclear Markers
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Travali S, <i>et al.</i> 1989. <i>J. Biol. Chem.</i> 264:7466.</li> <li>2. Waseem N, <i>et al.</i> 1990. <i>J. Cell Sci.</i> 96:121.</li> <li>3. Hall P, <i>et al.</i> 1990. <i>J. Pathol.</i> 162:285.</li> <li>4. Landberg G, <i>et al.</i> 1991. <i>Cancer Res.</i> 51:4570.</li> <li>5. Woods A, <i>et al.</i> 1991. <i>Histopathol.</i> 19:21.</li> <li>6. Hoegge C, <i>et al.</i> 2002. <i>Nature</i> 419:135.</li> <li>7. Yue H, <i>et al.</i> 2003. <i>World J. Gastroenterol.</i> 9:377.</li> <li>8. Shan B, <i>et al.</i> 2003. <i>J. Biol. Chem.</i> 278:44009.</li> </ol>
<b>Gene ID</b>	<a href="#">5111</a>

## Related Protocols

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[Intracellular Cytokine Staining Protocol - Video](#)

[Cell Fixation and Permeabilization Protocol using 70% Ethanol](#)

[Intracellular Flow Cytometry Staining Protocol](#)

## Other Formats

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Biotin anti-human/mouse/rat PCNA, PE anti-human/mouse/rat PCNA, Purified anti-human/mouse/rat PCNA, Alexa Fluor® 488 anti-human/mouse/rat PCNA, Alexa Fluor® 647 anti-human/mouse/rat PCNA, Alexa Fluor® 594 anti-human/mouse/rat PCNA

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