Product Datasheet

PCNA Antibody (PC10) - BSA Free
NB500-106

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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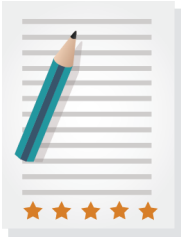


NB500-106

PCNA Antibody (PC10) - BSA Free

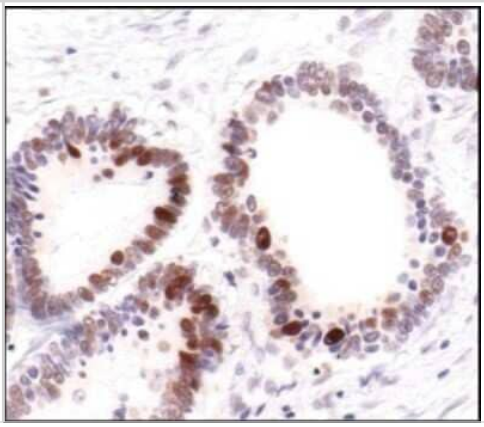
Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	PC10
Preservative	0.02% Sodium Azide
Isotype	IgG2a Kappa
Purity	Protein A purified
Buffer	PBS
Target Molecular Weight	30 kDa

Product Description	
Host	Mouse
Gene ID	5111
Gene Symbol	PCNA
Species	Human, Mouse, Rat, Porcine, Chicken, Drosophila, Fish, Marsupial, Primate, Rabbit, Yeast, Zebrafish
Reactivity Notes	Use in Mouse reported in scientific literature (PMID:33802807). Use in Marsupial reported in scientific literature (PMID:29253253).
Marker	Proliferation Marker
Specificity/Sensitivity	Specific for PCNA p36 protein expressed at high levels in proliferating cells.
Immunogen	Protein A-rat PCNA fusion obtained from pC2T

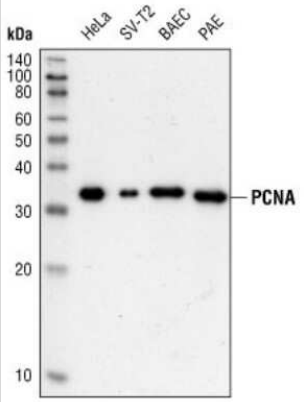
Product Application Details	
Applications	Western Blot, Simple Western, Chromatin Immunoprecipitation, ELISA, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation, Chromatin Immunoprecipitation (ChIP), Immunohistochemistry Free-Floating
Recommended Dilutions	Western Blot 1:2000, Simple Western 1:200, Chromatin Immunoprecipitation 1:10 - 1:500. Use reported in scientific literature (PMID 26883631), Flow Cytometry 1:10-1:1000, ELISA reported in scientific literature, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:1000-1:2000. Use reported in scientific literature (PMID 22068968), Immunoprecipitation 1:100, Immunohistochemistry-Paraffin 1:500-1:1000, Immunohistochemistry-Frozen 1:10-1:500, Immunohistochemistry Free-Floating reported in scientific literature (PMID 27212918), Chromatin Immunoprecipitation (ChIP) 1:10-1:500

Application Notes	It detects a band at 30 kDa by Western blot. For IHC on paraffin sections, heat-mediated citrate buffer antigen retrieval is recommended. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See Simple Western Antibody Database for Simple Western validation: Tested in HeLa lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:200, apparent MW was 36 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue. The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors.

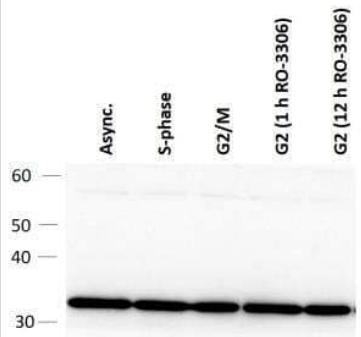
Images

Simple Western: PCNA Antibody (PC10) [NB500-106] - Image shows a specific band for PCNA in 0.5 mg/mL of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.	
Immunocytochemistry/Immunofluorescence: PCNA Antibody (PC10) [NB500-106] - NIH3T3 cells were fixed and permeabilized for 10 minutes using -20C MeOH. The cells were incubated with anti-PCNA Antibody (PC10) NB500-106 at 1 ug/ml overnight at 4C and detected with an anti-mouse Dylight 488 (Green) at a 1:1000 dilution for 60 minutes. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.	
Immunohistochemistry-Paraffin: PCNA Antibody (PC10) [NB500-106] - Analysis of paraffin-embedded human colon carcinoma, showing nuclear localization.	

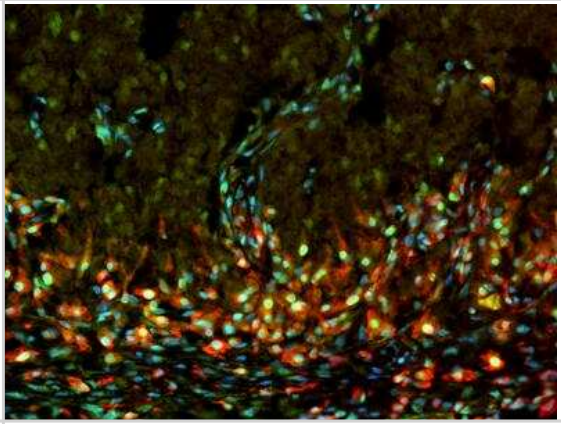
Western Blot: PCNA Antibody (PC10) [NB500-106] - Analysis of human (HeLa lysate), murine (SV-T2 lysate), bovine (BAEC lysate), and porcine (PAE lysate) cell extracts.



Western Blot: PCNA Antibody (PC10) [NB500-106] - Western blot of PCNA levels across different stages of the cell cycle. U-2 OS cells were synchronised at G1/S with 2 mM thymidine an released for 10 hours for G2/M or re-arrested in G2 for extended duration with 10uM RO-3306. Antibody at 1:2000. WB image submitted by a verified customer review.

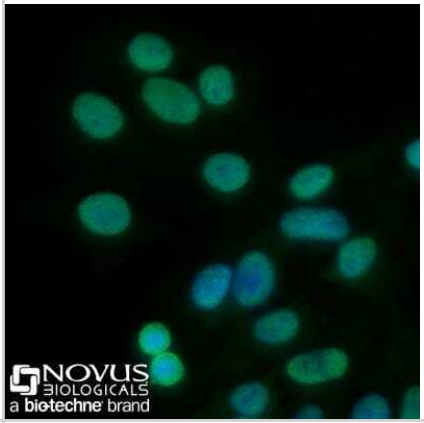


Immunohistochemistry-Frozen: PCNA Antibody (PC10) [NB500-106] - Paraformaldehyde fixed frozen section of brain from murine embryo using PCNA antibody clone PC10 (green), an IB4 antibody (red) and DAPI. Image provided by Dr. Siegenthaler via product review.

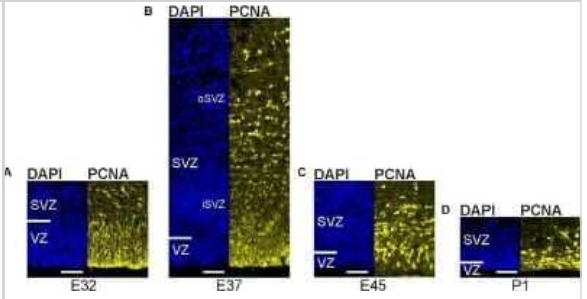


Immunocytochemistry/Immunofluorescence: PCNA Antibody (PC10) [NB500-106] - PC12 cells were fixed and permeabilized for 10 minutes using -20C MeOH. The cells were incubated with anti-PCNA Antibody (PC10) NB500-106 at 1 ug/ml overnight at 4C and detected with an anti-mouse Dylight 488 (Green) at a 1:1000 dilution for 60 minutes. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.

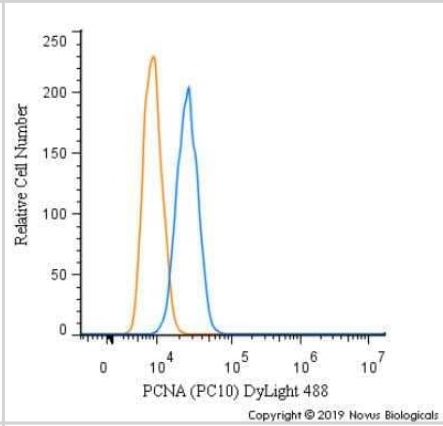
Immunocytochemistry/Immunofluorescence: PCNA Antibody (PC10) [NB500-106] - HeLa cells were fixed and permeabilized for 10 minutes using cold (-20C) MeOH. The cells were incubated with anti-PCNA [PC10] at 5 ug/mL overnight at 4C and detected with an anti-mouse IgG Dylight 488 (Green) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



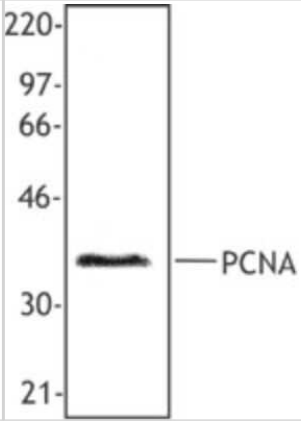
Immunohistochemistry: PCNA Antibody (PC10) [NB500-106] - Development of the germinal zones in the tree shrew neocortex. Immunofluorescence for PCNA (yellow) and DAPI staining (blue) on 30 um-cryosections of E32-P1 tree shrew neocortex. The top margin of the image corresponds to the transition zone SVZ/intermediate zone. Scale bars, 50 um. VZ, ventricular zone; SVZ, subventricular zone; iSVZ, inner SVZ; oSVZ, outer SVZ. Image collected and cropped by CiteAb from the following publication (https://journal.frontiersin.org/article/10.3389/fnana.2018.00029/full), licensed under a CC-BY license.



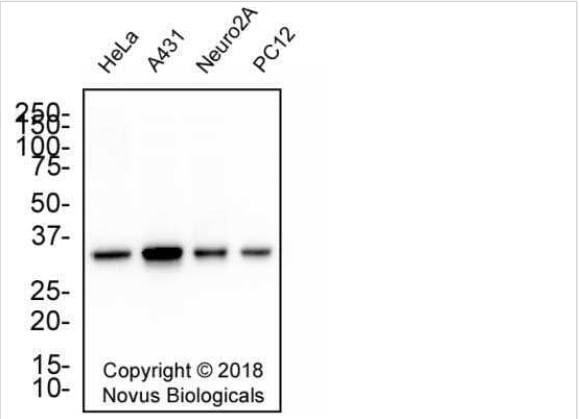
Flow Cytometry: PCNA Antibody (PC10) [NB500-106] - An intracellular stain was performed on HepG2 cells with PCNA Antibody (PC10) NB500 -106G (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 10 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to DyLight 488.



Western Blot: PCNA Antibody (PC10) [NB500-106] - HeLa cell nuclear extract was resolved by electrophoresis, transferred to nitrocellulose and probed with monoclonal anti-PCNA antibody. Proteins were visualized using a goat anti-mouse secondary conjugated to HRP and a chemiluminescence detection system.

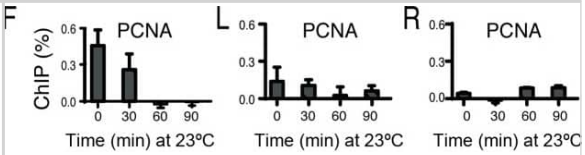


Western Blot: PCNA Antibody (PC10) [NB500-106] - Whole cell protein from human HeLa, A431, mouse Neuro2A and rat PC12 cells was separated on a 4-20% gel by SDS-PAGE, transferred to 0.2 um PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 1.0 ug/mL anti-Histone h3 in block buffer and detected with an anti-mouse HRP secondary antibody using chemiluminescence.

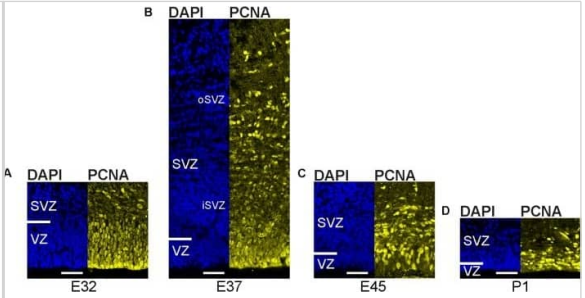


Immunohistochemistry: PCNA Antibody (PC10) [NB500-106] - Analysis of PCNA in mouse cornea. Image courtesy of product review by Bo-Yie Chen.

Chromatin Immunoprecipitation: PCNA Antibody (PC10) [NB500-106] - Events taking place during a transient telomere dysfunction. All strains were cdc13–1, incubated for 160 min at 36°C to induce telomere uncapping, followed by 90 min at 23°C to allow telomere re-capping. Nocodazole & BrdU were added to the cultures at time 0. (A) Dynamics of ssDNA loss in sub-telomeres. (B) BrdU incorporation in sub-telomeres, minus incorporation at ‘CEN’ (e.g. a centromere-proximal locus, in this case ERG26). (C–F) Dynamics of the protein association with sub-telomeres, measured for Rap1 & major DNA synthesis factors (indicated above each graph). ChIP (%) was calculated as the fraction of immunoprecipitated sub-telomeric DNA, minus the fraction precipitated at ‘CEN’ (G) Dynamics of ssDNA loss at YER188W. (H) BrdU incorporation at YER188W, minus incorporation at ‘CEN’. (I–L) The protein association with YER188W was analyzed as in C–F. (M) ssDNA at ‘CEN’. (N) BrdU incorporation at ‘CEN’. (O–R) Association of proteins with ‘CEN’. (S) Growth of serial dilution of wild-type (first row) & cdc13–1 cells with or without additional mutations (indicated on the left of each row) at temperatures indicated above each plate. The plate shown on the right was cycled three times between 4 h at 36°C (to accumulate ssDNA) & 4 h at 21°C (to re-synthesize DNA), followed by incubation at 21°C for another two days. Image collected & cropped by CiteAb from the following publication (https://academic.oup.com/nar/article-lookup/doi/10.1093/nar/gkw071), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immunocytochemistry/ Immunofluorescence: PCNA Antibody (PC10) [NB500-106] - Development of the germinal zones in the tree shrew neocortex. (A–D) Immunofluorescence for PCNA (yellow) & DAPI staining (blue) on 30 µm-cryosections of E32–P1 tree shrew neocortex. The top margin of the image corresponds to the transition zone SVZ/intermediate zone. Scale bars, 50 µm. VZ, ventricular zone; SVZ, subventricular zone; iSVZ, inner SVZ; oSVZ, outer SVZ. (E) Quantification of the VZ thickness of the E32–P1 tree shrew neocortex. (F) Quantification of the SVZ thickness of the E32–P1 tree shrew neocortex. (G) Quantification of the VZ & SVZ thickness of the E32–P1 tree shrew neocortex, expressed as percentage of the sum of VZ & SVZ. (H) Quantification of the iSVZ & oSVZ thickness of the E37 tree shrew neocortex, expressed as percentage of the sum of iSVZ & oSVZ. (E–H) Data represent mean ± SD & were obtained from two consecutive sections of two brains each. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29725291), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Teresa BG, Ayala-Zambrano C, González-Suárez M et Al. Reversion from basal histone H4 hypoacetylation at the replication fork increases DNA damage in FANCA deficient cells PLoS One 2024-05-31 [PMID: 38820384]

Abhimanu Pandey, Cheng Shen, Shouya Feng, Daniel Enosi Tuipulotu, Chinh Ngo, Cheng Liu, Melan Kurera, Anukriti Mathur, Shweta Venkataraman, Jing Zhang, Dipti Talaulikar, Renhua Song, Justin J.-L. Wong, Narci Teoh, Nadeem O. Kaakoush, Si Ming Man Ku70 senses cytosolic DNA and assembles a tumor-suppressive signalosome Science Advances 2024-01-26 [PMID: 38277448]

Yang G, Xiang J, Yang X et al. Nuclear translocation of SIRT4 mediates deacetylation of U2AF2 to modulate renal fibrosis through alternative splicing-mediated upregulation of CCN2 eLife 2024-11-04 [PMID: 39495216]

Jingan Chen, Yi Liu, Jingwen Zhang, Yuping Yang, Haowei Liang, Ting Li, Li Yan, Li Zhou, Letian Shan, Hui Wang External Application of Human Umbilical Cord-Derived Mesenchymal Stem Cells in Hyaluronic Acid Gel Repairs Foot Wounds of Types I and II Diabetic Rats Through Paracrine Action Mode Stem Cells Translational Medicine 2023-10-01 [PMID: 37639574]

Linh Tran Nguyen Truc, Satoshi Matsuda, Akiko Takenouchi, Quynh Tran Thuy Huong, Yui Kotani, Tatsuhiko Miyazaki, Hiroaki Kanda, Katsuhiko Yoshizawa, Hiroyasu Tsukaguchi Mechanism of cystogenesis by Cd79a-driven, conditional mTOR activation in developing mouse nephrons Scientific Reports 2023-01-10 [PMID: 36627370]

Changsheng Zhang, Shengyang Du, Lei Cao Retracted Article: Long non-coding RNA KCNQ1OT1 promotes osteosarcoma progression by increasing β-catenin activity RSC Advances 2018-11-08 [PMID: 35558611]

Meligy FY, El-Deen Mohammed HS, Mostafa TM et al. Therapeutic Potential of Mesenchymal Stem Cells versus Omega n - 3 Polyunsaturated Fatty Acids on Gentamicin-Induced Cardiac Degeneration Pharmaceutics 2022-06-22 [PMID: 35890218] (IHC-P, Rat)

Details:
Dilutions: 1:100

Lundine D, Annor GK, Chavez V et al. The C-terminus of Gain-of-Function Mutant p53 R273H Is Required for Association with PARP1 and Poly-ADP-Ribose Molecular cancer research : MCR 2022-12-02 [PMID: 36074101] (WB, Human)

Parker K, Zeng F, Zhan Y et al. Altered DNA repair related proteins in Parkinson's disease model VMAT2 Lo mice Research Square 2022-10-26 (IHC-FrFl, Mouse)

Rothermund K, Calabrese TC, Syed-Picard FN Differential Effects of Escherichia coli- Versus Porphyromonas gingivalis-derived Lipopolysaccharides on Dental Pulp Stem Cell Differentiation in Scaffold-free Engineered Tissues Journal of endodontics 2022-11-01 [PMID: 36108879]

Chung H, Moon S, Kang S Et al. Corneal Epithelial Removal with a Newly Designed Epithelial Brush J Ophthalmol 2022-02-14 [PMID: 35154818]

Martins RR, Zamzam M, Tracey-White D et al. MUller Glia maintain their regenerative potential despite degeneration in the aged zebrafish retina Aging cell 2022-03-22 [PMID: 35315590] (IF/IHC, Fish)

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Products Related to NB500-106

NBL1-14184	PCNA Overexpression Lysate
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NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-96981-0.5mg	Mouse IgG2a Kappa Isotype Control (M2AK)

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This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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