abcam

Product datasheet

Anti-PCNA antibody [PC10] ab29

★★★★★ 72 Abreviews 662 References 画像数 13

製品の概要

製品名	Anti-PCNA antibody [PC10]
製品の詳細	Mouse monoclonal [PC10] to PCNA
由来種	Mouse
アプリケーション	**適用あり:** IHC-P, WB, ICC/IF, Flow Cyt (Intra)
種交差性	**交差種:** Mouse, Rat, Human **交差が予測される動物種:** Chicken, Cow, Pigeon, Pig, Drosophila melanogaster, Monkey, Zebrafish, Thornback ray, Dogfish, Catshark
免疫原	Fusion protein corresponding to PCNA. Protein A-PCNA fusion protein obtained from pC2T construct. This construct lacked 93 nucleotides at the 3' end of PCNA.
ポジティブ・コントロール	WB: HeLa, HEK293, A431 whole cell lysates, PC12, SV40LT-SMC, NIH 3T3, rat liver, rat heart. IHC-P: Human breast (Paget's disease of the nipple), mouse liver, mouse gut, rat spinal cord DRG, developing chick brain, zebrafish intestine, rat spleen, rat large intestine. IHC-Fr: mouse embryonic brain, HeLa. Flow Cyt: HeLa.
特記事項	This antibody clone [PC10] is manufactured by Abcam. If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact **orders@abcam.com** or you can find further information **here**. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
バッファー	pH: 7.2 Preservative: 0.02% Sodium azide

	Constituents: PBS, 6.97% L-Arginine
精製度	Protein G purified
ポリ/モノ	モノクローナル
クローン名	PC10
ミエローマ	Sp2/0-Ag14
アイソタイプ	IgG2a
軽鎖の種類	kappa

アプリケーション

The Abpromise guarantee Abpromise保証は、次のテスト済みアプリケーションにおけるab29の使用に適用されます

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

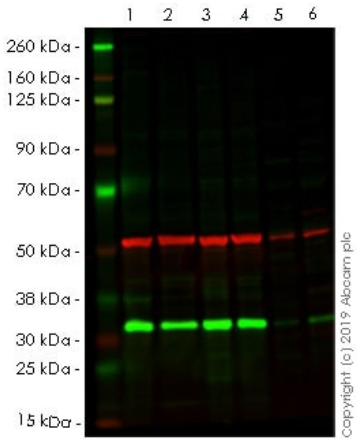
アプリケーション	Abreviews	特記事項
IHC-P	★★★★★ (28)	1/10000 - 1/30000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB	★★★★★ (20)	Use a concentration of 1 µg/ml. Detects a band of approximately 30 kDa (predicted molecular weight: 29 kDa).
ICC/IF	★★★★☆ (14)	Use a concentration of 1 - 5 µg/ml. Methanol fixation recommended
Flow Cyt (Intra)		Use 1µg for 10^6 cells. **ab170191** - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

ターゲット情報

機能	This protein is an auxiliary protein of DNA polymerase delta and is involved in the control of eukaryotic DNA replication by increasing the polymerase's processibility during elongation of the leading strand. 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.
配列類似性	Belongs to the PCNA family.
翻訳後修飾	Upon methyl methanesulfonate-induced DNA damage, mono-ubiquitinated by the UBE2B-RAD18 complex on Lys-164. This induces non-canonical polyubiquitination on Lys-164 through 'Lys-63' linkage of ubiquitin moieties by the E2 complex UBE2N-UBE2V2 and the E3 ligases, HLTF, RNF8 and SHPRH, which is required for DNA repair. 'Lys-63' polyubiquitination prevents genomic instability on DNA damage. Monoubiquitination at Lys-164 also takes place in undamaged proliferating cells, and is mediated by the DCX(DTL) complex, leading to enhance PCNA-dependent translesion DNA synthesis. Acetylated in response to UV irradiation. Acetylation disrupts interaction with NUDT15 and promotes degradation.
細胞内局在	Nucleus. Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase. Together with APEX2, is redistributed in discrete

nuclear foci in presence of oxidative DNA damaging agents.

画像



Western blot - Anti-PCNA antibody [PC10] (ab29)

All lanes : Anti-PCNA antibody [PC10] (ab29) at 1 µg/ml

Lane 1 : HeLa 20 ug
Lane 2 : PC12 20 ug
Lane 3 : SV40LT-SMC 20 ug
Lane 4 : NIH 3T3 20 ug
Lane 5 : Rat liver 20 ug
Lane 6 : Rat heart 20 ug

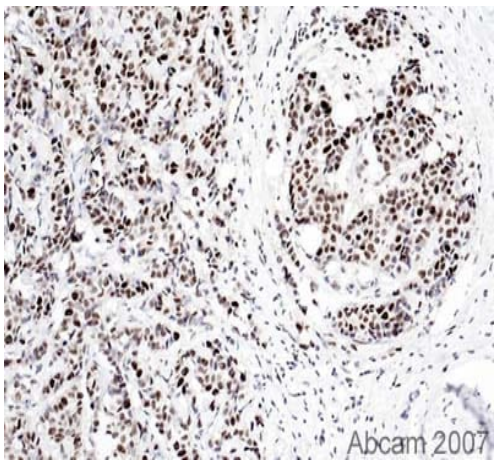
Secondary
All lanes : Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed (**ab216772**) at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 29 kDa

Merged signal (red and green). Green - ab29 observed at 32 kDa. Red - loading control, **ab52866**, observed at 50 kDa.

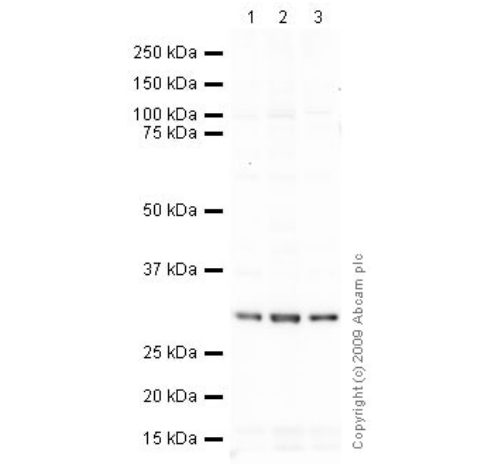
All samples were subjected to SDS-PAGE. The membrane was blocked with 3% NF Milk. Ab29 and **ab52866**(Rabbit anti alpha Tubulin loading control) were incubated overnight at 4°C at 1 ug/mL and 1/20000 dilution respectively. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed **ab216772** and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed **ab216777** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCNA antibody [PC10] (ab29)

This image is courtesy of Carl Hobbs, King's College London, United Kingdom

Mouse monoclonal [PC10] to PCNA - Proliferation Marker (ab29) used in immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections; 1/6000 for 2h at RT) on human tissue sections (Paget's disease of the nipple). Antigen retrieval step: Heat mediated. Blocking step: 1% BSA for 10 mins at RT. Incubation time: Secondary Antibody: Biotin conjugated goat anti mouse Igs (1/200).



Western blot - Anti-PCNA antibody [PC10] (ab29)

All lanes : Anti-PCNA antibody [PC10] (ab29) at 5 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2 : HEK293 (Human embryonic kidney cell line) Whole Cell Lysate
Lane 3 : A431 (Human epithelial carcinoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

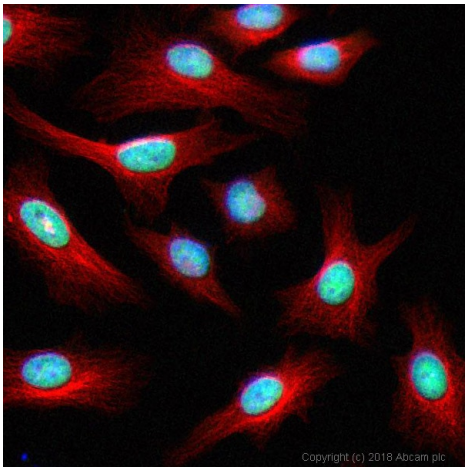
Secondary
All lanes : Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Predicted band size: 29 kDa

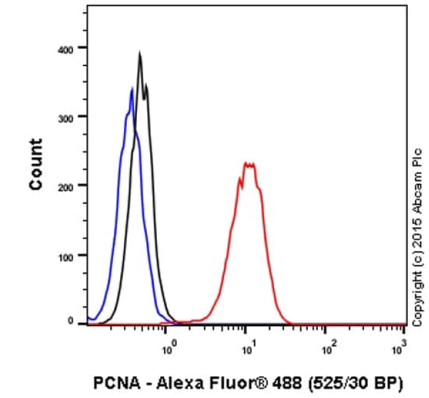
Observed band size: 29 kDa

Exposure time: 4 minutes



Immunocytochemistry/ Immunofluorescence - Anti-PCNA antibody [PC10] (ab29)

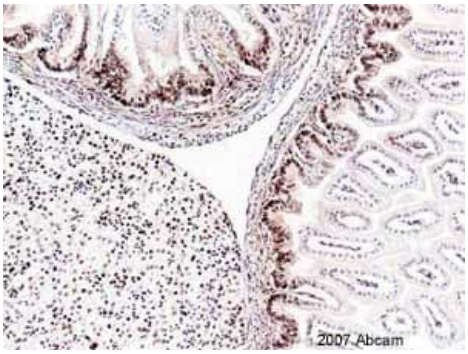
ab29 stained in HeLa cells. Cells were fixed with 100% methanol (5 min) at room temperature and incubated with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% triton for 1h at room temperature to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab29 at 5 µg/ml and **ab6046** (Rabbit polyclonal to beta tubulin - Loading Control) at 1/1000 dilution overnight at +4°C. The secondary antibodies were **ab150117** (pseudo-colored red) and **ab150080** (colored green) used at 1 µg/ml for 1 hour at room temperature. DAPI was used to stain the cell nuclei (colored blue) at a concentration of 1.43 µM for 1hour at room temperature.



Flow Cytometry (Intracellular) - Anti-PCNA antibody [PC10] (ab29)

Overlay histogram showing HeLa cells stained with ab29 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween 20 for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab29, 0.1µg/1x10^6 cells) for 30 min at 22ºC. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse IgG (H&L) (**ab150113**) at 1/2000 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG2a [ICIGG2A] (**ab91361**, 0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control.

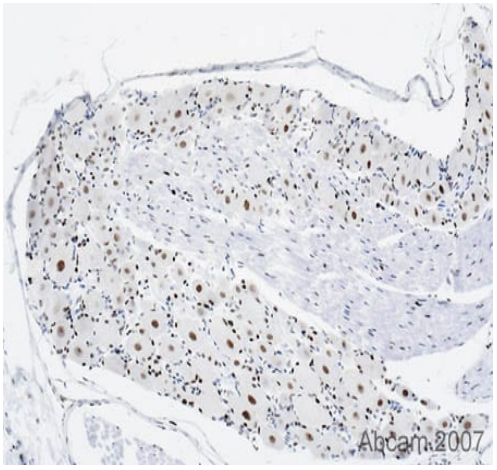
Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCNA antibody [PC10] (ab29)

This image is courtesy of an abreview submitted by Carl Hobbs (King's College London, United Kingdom)

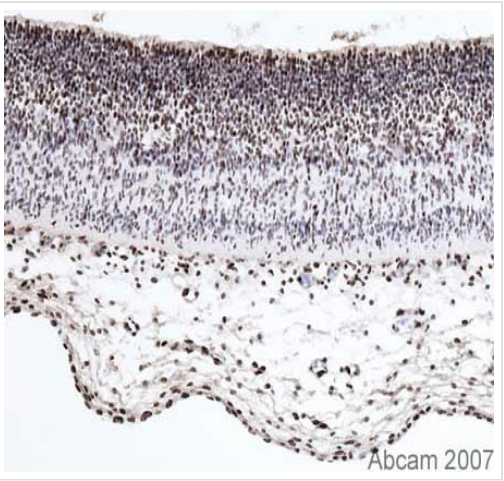
ab29 at 1/6000 staining mouse embryo (day 17) liver and gut tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in Tris buffer was performed. The tissue was blocked before incubation with the antibody for 2 hours. A biotinylated goat polyclonal antibody was used as the secondary.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCNA antibody [PC10] (ab29)

This image is courtesy of Carl Hobbs, King's College London, United Kingdom

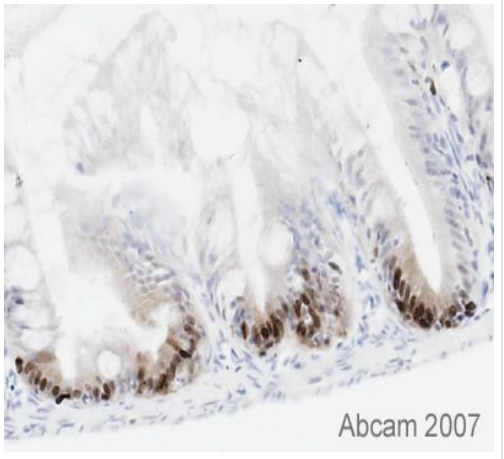
Immunohistochemistical staining (Formaldehyde/PFA-fixed paraffin-embedded sections) for PCNA antibody [PC10] - Proliferation Marker (ab29) on Rat Tissue sections (adult spinal cord DRG). Antigen retrieval step: Heat mediated. Blocking step: 1% BSA for 10 mins at RT. Primary Antibody used at 1/6000 for 2 minutes at RT. Secondary Antibody: Biotin labelled goat anti mouse Igs (1/200).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCNA antibody [PC10] (ab29)

This image is courtesy of Carl Hobbs, King's College London, United Kingdom

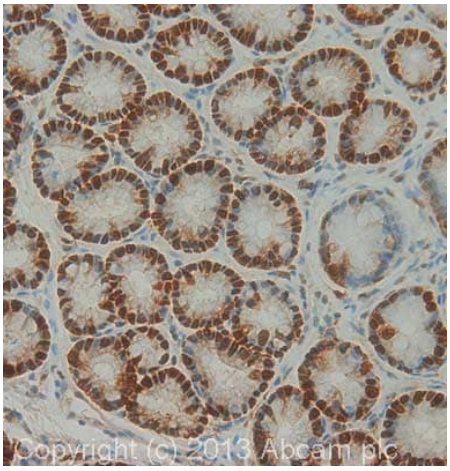
Mouse monoclonal [PC10] to PCNA - Proliferation Marker (ab29) used in immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections; 1/6000 for 2h at RT) on E6 developing chick brain). Antigen retrieval step: Heat mediated. Blocking step: 1% BSA for 10 mins at RT. Incubation time: Secondary Antibody: Biotin conjugated goat anti mouse Igs (1/200). NB: This image shows developing brain/overlying skin.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCNA antibody [PC10] (ab29)

This image is courtesy of Carl Hobbs, King's College London, United Kingdom

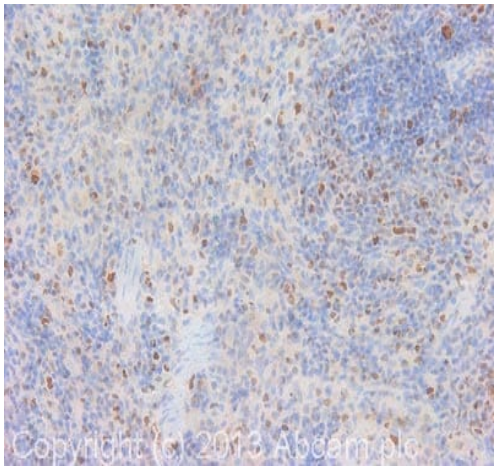
Mouse monoclonal [PC10] to PCNA - Proliferation Marker (ab29) used in immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections;1/6000 for 2h at RT) on intestine of adult zebrafish). Antigen retrieval step: Heat mediated. Blocking step: 1% BSA for 10 mins at RT. Incubation time: Secondary Antibody: Biotin conjugated goat anti mouse Igs (1/200). NB: The crypt nuclei on this image of zebrafish intestine, are positive for the PCNA/PC10 clone conforming to accepted localisation data for PCNA in other species.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCNA antibody [PC10] (ab29)

IHC image of PCNA staining in rat large intestine formalin fixed paraffin embedded tissue section, performed on a Leica Bond system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab29, 0.025µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

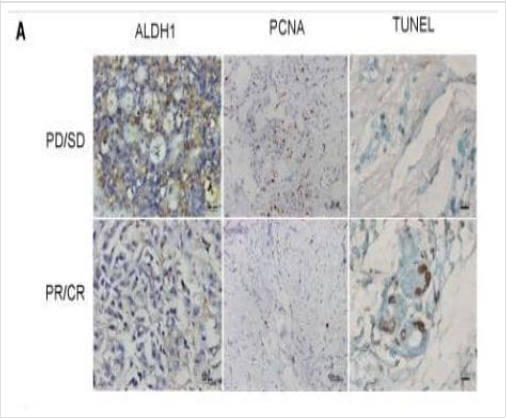
For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCNA antibody [PC10] (ab29)

IHC image of PCNA staining in rat spleen formalin fixed paraffin embedded tissue section, performed on a Leica Bond system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab29, 1/30,000 dilution for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



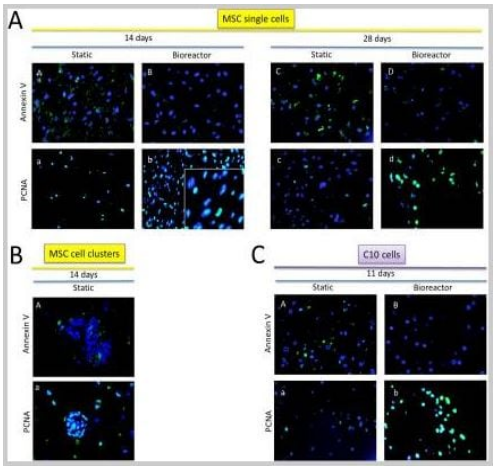
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCNA antibody [PC10] (ab29)

Aldehyde dehydrogenase (ALDH1) expression correlates with clinical outcome of breast cancer patients

(A) Immunohistochemical staining shows tumors with poor clinical response (progressive or stable disease, PD/SD) to neo-adjuvant chemotherapy express high ALDH1 (>20% positive cancer cells) in pre-chemotherapy samples, and tumors with partal response (PR) express low ALDH1 (≤20% positive cancer cells). High proliferating cell nuclear antigen (PCNA)(>25% positive cancer cells) and poor apoptosis are observed in tumors with PD/SD after neo-adjuvant chemotherapy. Representative images of ALDH1 (×200), PCNA (×200) and Terminal deoxynucleotidyl transferase (TdT)-mediated dUTP labeling (TUNEL,×400).

PCNA is detected using ab29 at 1/100 dilution.

(From Figure 1A of Gong et al)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCNA antibody [PC10] (ab29)

Annexin V and PCNA staining of decellularized lung scaffolds recellularized with (A) MSCs in static versus bioreactor conditions for 14 (panels A, B for annexin V, and a, b for PCNA) and 28 days (panels C, D for annexin V, and c, d for PCNA) (single cells), (B) MSC cell clusters in static conditions at 14 days (panel A for annexin V, and a for PCNA), (C) C10 cells in static (panel A for annexin V, a for PCNA) versus bioreactor (panel B for annexin V, b for PCNA) conditions for 11 days.

An inset in Fig 4Ab with higher magnification is shown to demonstrate that a majority of the cells stained positive for PCNA. Cell nuclei are labeled in blue; marker of interest is labeled in green. Magnifications are 400x. Overlap of cell nucleus and marker of interest can generate green or white color. For each condition, images are representative of the entire lung.

MSCs = Bone marrow-derived mouse mesenchymal stromal (stem) cells.

PCNA is detected using ab29 at 1/1000 dilution.

(From Figure 4 of Crabbe et al)

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