abcam

Product datasheet

Alexa Fluor® 647 Anti-PCNA antibody [EPR3821] ab193964

Recombinant RabMAb

1 References 3 Images

Overview

Product name	Alexa Fluor® 647 Anti-PCNA antibody [EPR3821]
Description	Alexa Fluor® 647 Rabbit monoclonal [EPR3821] to PCNA
Host species	Rabbit
Conjugation	Alexa Fluor® 647. Ex: 652nm, Em: 668nm
Tested applications	**Suitable for:** ICC/IF, Flow Cyt (Intra)
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	ICC/IF: HeLa cells. Flow Cyt (intra): HeLa cells.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or **outlicensing@thermofisher.com**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle. Store In the Dark.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR3821
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab193964 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

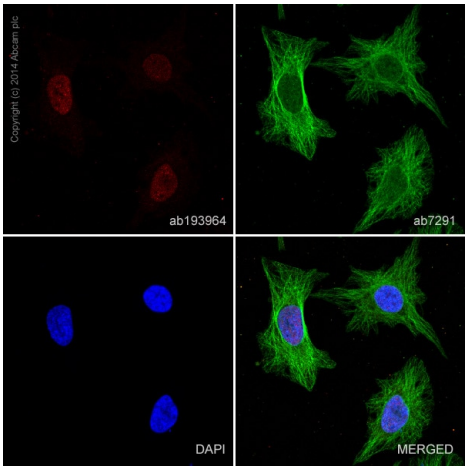
Application	Abreviews	Notes
ICC/IF		1/100.
Flow Cyt (Intra)		Use 2µl for 10^6 cells. **ab199093** - Rabbit monoclonal IgG (Alexa Fluor® 647), is suitable for use as an isotype control with this antibody.

Target

Function	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.
Sequence similarities	Belongs to the PCNA family.
Post-translational modifications	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.
Cellular localization	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.

Images

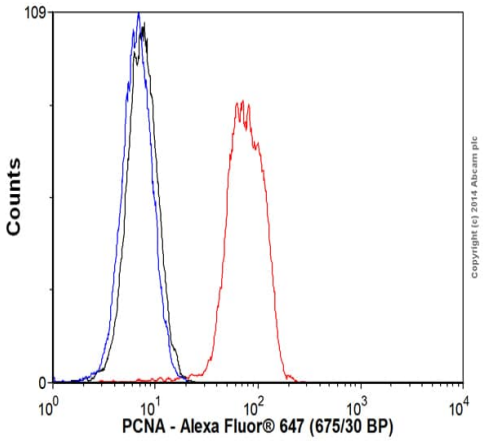


Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-PCNA antibody [EPR3821] (ab193964)

ab193964 staining PCNA in HeLa cells. The cells were fixed with 100% methanol (10 min) and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Triton X-100 for 1hr. The cells were then incubated with ab193964 at a working diltuion of 1 in 50 (shown in red) and **ab7291** (Mouse monoclonal [DM1A] to alpha Tubulin) at 1µg/ml overnight at +4°C, followed by a further incubation at room temperature for 1hr with an AlexaFluor® 488 Goat anti-mouse IgG (H&L - preadsorbed) secondary (**ab150117**) at 2 µg/ml (shown in green). Nuclear DNA was labelled in blue with DAPI.

This product gave a positive signal in 4% formaldehyde (10 min) fixed HeLa cells under the same testing conditions.

Image was taken with a Confocal microscope (Leica-microsystems, TCS SP8).

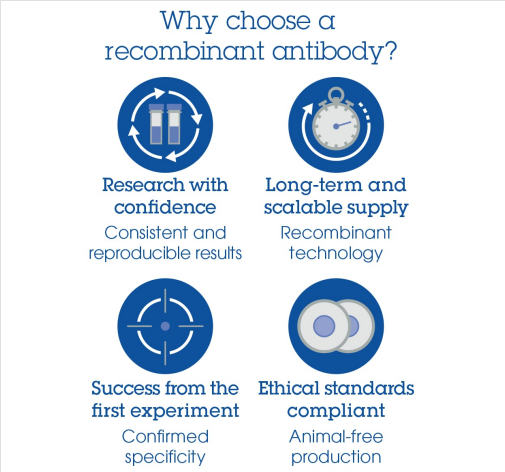


Flow Cytometry (Intracellular) - Alexa Fluor® 647 Anti-PCNA antibody [EPR3821] (ab193964)

Overlay histogram showing HeLa cells stained with ab193964 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween 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 (ab193964, 2µl/1x10^6 cells) for 30 min at 22ºC. Isotype control antibody (black line) was rabbit IgG (monoclonal) (Alexa Fluor® 647) (1µg/1x10^6 cells) for 30 min at 22ºC. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 25mW red solid state diode laser (635nm) and 675/30 bandpass filter.

This antibody gave a positive signal in HeLa fixed with 4% formaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Alexa Fluor® 647 Anti-PCNA antibody [EPR3821]

(ab193964)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors