abcam

Product datasheet

Anti-PCNA antibody [16D10] - BSA and Azide free ab255842

Recombinant

1 References 5 Images

Overview

Product name	Anti-PCNA antibody [16D10] - BSA and Azide free
Description	Rat monoclonal [16D10] to PCNA - BSA and Azide free
Host species	Rat
Tested applications	**Suitable for:** IP, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	ICC: NIH/3T3, HeLa and C6 cells. IP: NIH/3T3 cell lysate.
General notes	ab255842 is the carrier-free version of **ab252848**. This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. 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**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	16D10
Isotype	IgG2b

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab255842 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
IP		1/60.
ICC/IF		1/100.

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.

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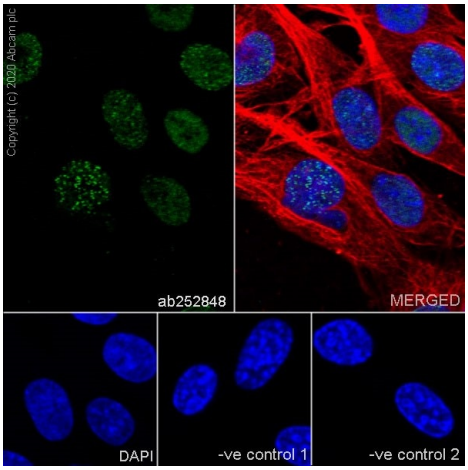
Images



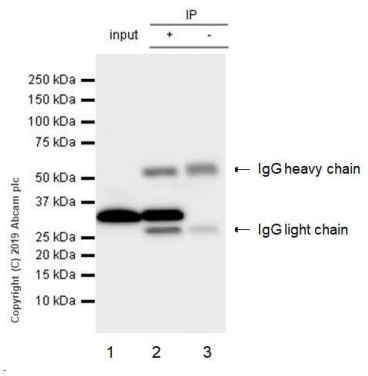
Immunocytochemistry/ Immunofluorescence - Anti-PCNA antibody [16D10] - BSA and Azide free (ab255842)

Immunocytochemical analysis of 100% methanol-fixed NIH/3T3 (mouse embryonic fibroblast) cells labeling PCNA (green) using **ab252848** at 1/100 dilution followed by **ab150157** Goat Anti-Rat IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (2µg/ml). **ab179504** Anti-beta IV Tubulin antibody was used as a counterstain at 1/200 dilution (10µg/ml) followed by **ab150080** AlexaFluor®594 Goat anti-Rabbit secondary at 1/1000 dilution (2µg/ml) (Red). Confocal image showing nuclear staining in NIH/3T3 cell line. The nuclear counterdstain was DAPI (Blue).

-ve control 1: **ab252848** (1/50 dilution) followed by **ab150080** (1/1000 dilution).

-ve control 2: **ab179504** (1/200 dilution) followed by **ab150157** (1/1000 dilution).

This image was produced by the same antibody in a different buffer formulation containing PBS, BSA and sodium azide (**ab252848**).



Immunoprecipitation - Anti-PCNA antibody [16D10] - BSA and Azide free (ab255842)

PCNA was immunoprecipitated from 0.35 mg NIH/3T3 (mouse embryonic fibroblast), whole cell lysate using **ab252848** at 1/60 dilution (2µg in 0.35µg lysates). Western blot was performed on the immunoprecipitate using **ab252848** at 1/1000 dilution (0.35µg/ml) followed by anti-Rat IgG H&L (HRP) (**ab205720**) secondary at 1/5000 dilution.

Lane 1: NIH/3T3 whole cell lysate 10 µg.

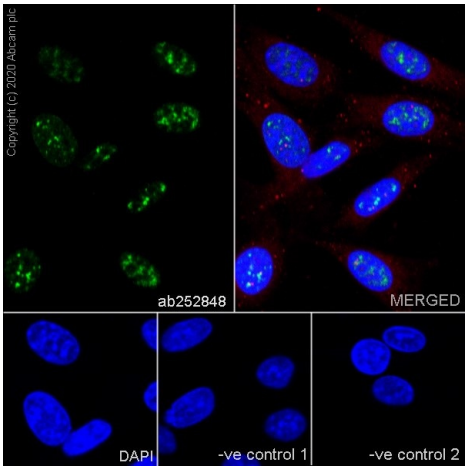
Lane 2: **ab252848** IP in NIH/3T3 whole cell lysate.

Lane 3: Rat monoclonal IgG instead of **ab252848** in NIH/3T3 whole cell lysate.

Blocking/Diluting buffer and concentration: 5% NFDM/TBST.

Exposure time: 1 second.

This image was produced by the same antibody in a different buffer formulation containing PBS, BSA and sodium azide (**ab252848**).



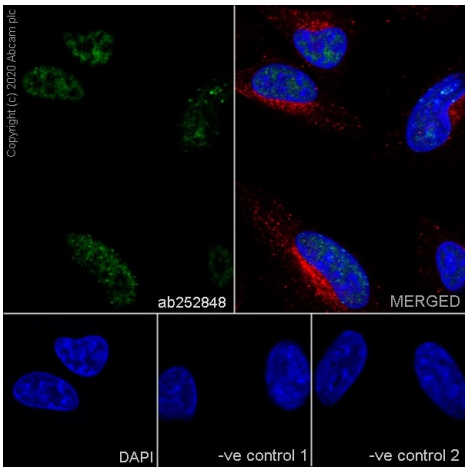
Immunocytochemistry/ Immunofluorescence - Anti-PCNA antibody [16D10] - BSA and Azide free (ab255842)

Immunocytochemical analysis of 100% methanol-fixed C6 (rat glial tumor glial cell) cells labeling PCNA (green) using **ab252848** at 1/100 dilution followed by **ab150157** Goat Anti-Rat IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (2µg/ml). **ab179504** Anti-beta IV Tubulin antibody was used as a counterstain at 1/200 dilution (10µg/ml) followed by **ab150080** AlexaFluor®594 Goat anti-Rabbit secondary at 1/1000 dilution (2µg/ml) (Red). Confocal image showing nuclear staining in C6 cell line. The nuclear counterdstain was DAPI (Blue).

-ve control 1: **ab252848** (1/50 dilution) followed by **ab150080** (1/1000 dilution).

-ve control 2: **ab179504** (1/200 dilution) followed by **ab150157** (1/1000 dilution).

This image was produced by the same antibody in a different buffer formulation containing PBS, BSA and sodium azide (**ab252848**)



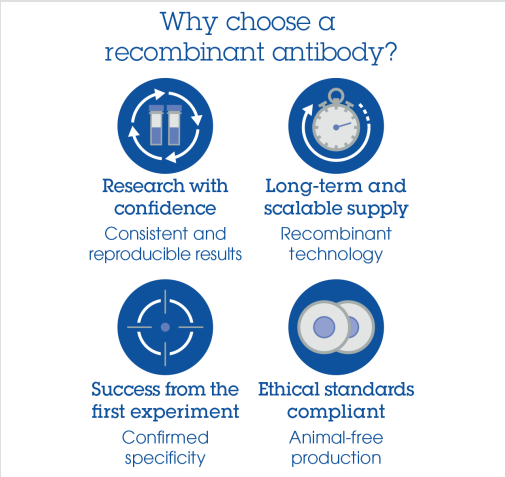
Immunocytochemistry/ Immunofluorescence - Anti-PCNA antibody [16D10] - BSA and Azide free (ab255842)

Immunocytochemical analysis of 100% methanol-fixed HeLa (human cervix adenocarcinoma epithelial cell) cells labeling PCNA (green) using **ab252848** at 1/100 dilution followed by **ab150157** Goat Anti-Rat IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (2µg/ml). **ab179504** Anti-beta IV Tubulin antibody was used as a counterstain at 1/200 dilution (10µg/ml) followed by **ab150080** AlexaFluor®594 Goat anti-Rabbit secondary at 1/1000 dilution (2µg/ml) (Red). Confocal image showing nuclear staining in HeLa cell line. The nuclear counterdstain was DAPI (Blue).

-ve control 1: **ab252848** (1/50 dilution) followed by **ab150080** (1/1000 dilution).

-ve control 2: **ab179504** (1/200 dilution) followed by **ab150157** (1/1000 dilution).

This image was produced by the same antibody in a different buffer formulation containing PBS, BSA and sodium azide (**ab252848**)



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(ab255842)

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