abcam

ab240637

Anti-RPA32/RPA2 antibody [EPR22950-81]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR22950-81
Purification technique	Affinity purification Protein A
Concentration	0.609 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

ChIP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/600
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/5000
Notes	-

Target data

See full target information RPA2

Function	As part of the heterotrimeric replication protein A complex (RPA/RP-A), binds and stabilizes single-stranded DNA intermediates that form during DNA replication or upon DNA stress. It prevents their reannealing and in parallel, recruits and activates different proteins and complexes involved in DNA metabolism. Thereby, it plays an essential role both in DNA replication and the cellular response to DNA damage. In the cellular response to DNA damage, the RPA complex controls DNA repair and DNA damage checkpoint activation. Through recruitment of ATRIP activates the ATR kinase a master regulator of the DNA damage response. It is required for the recruitment of the DNA double-strand break repair factors RAD51 and RAD52 to chromatin in response to DNA damage. Also recruits to sites of DNA damage proteins like XPA and XPG that are involved in nucleotide excision repair and is required for this mechanism of DNA repair. Also plays a role in base excision repair (BER) probably through interaction with UNG. Also recruits SMARCAL1/HARP, which is involved in replication fork restart, to sites of DNA damage. May also play a role in telomere maintenance. RPA stimulates 5'-3' helicase activity of BRIP1/FANCJ (PubMed:17596542).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

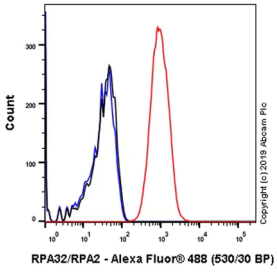
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

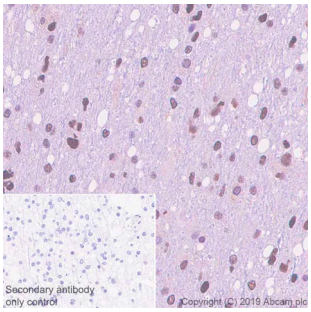
12 product images



Flow Cytometry (Intracellular) - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637)

RPA32/RPA2 Flow Cytometry (Intracellular) staining using rabbit Anti-RPA32/RPA2 antibody

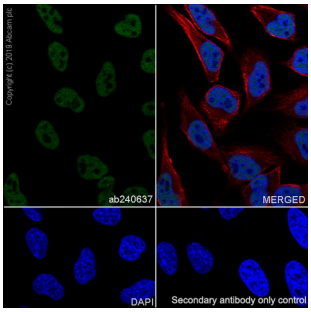
Intracellular flow cytometric analysis of 4% paraformaldehyde fixed. 90% methanol permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cells labeling RPA32/RPA2 with ab240637 at 1/600 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730) isotype control (black)and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637)

RPA32/RPA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPA32/RPA2 antibody

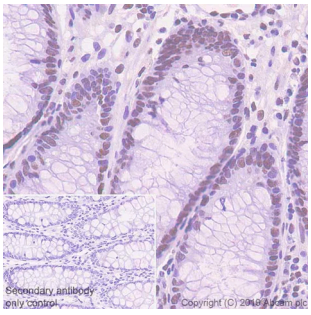
Immunohistochemical analysis of paraffin-embedded human glioma tissue labeling RPA32/RPA2 with ab240637 at 1/5000 dilution (0.103 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on human glioma (PMID: 20154705) is observed. The section was incubated with ab240637 for 10 mins at RT. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 6.0, epitope retrieval solution 1) for 20 mins. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).



Immunocytochemistry/ Immunofluorescence - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637)

RPA32/RPA2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RPA32/RPA2 antibody

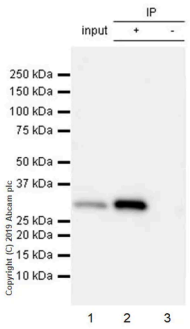
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cells labeling RPA32/RPA2 with ab240637 at 1/100 dilution, followed by anti-RPA32/RPA2 ab150077 AlexaFluor®488 Goat anti-Rabbit secondary antibody at 1/1000 dilution (Green). Confocal image showing nuclear staining in HeLa cell line is observed. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The nuclear counterstain was DAPI (Blue). Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is AlexaFluor®488 Goat anti-Rabbit secondary (ab150077) at 1/1000 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637)

RPA32/RPA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPA32/RPA2 antibody

Immunohistochemical analysis of paraffin-embedded human colon tissue labeling RPA32/RPA2 with ab240637 at 1/5000 dilution (0.103 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear staining on human colon (PMID: 20154705) is observed. The section was incubated with ab240637 for 10 mins at RT. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 6.0, epitope retrieval solution 1) for 20 mins. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).



Immunoprecipitation - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637)

RPA32/RPA2 was immunoprecipitated from 0.35 mg HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate with ab240637 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab240637 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg.

Lane 2: ab240637 IP in HeLa whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab240637 in HeLa whole cell lysate.

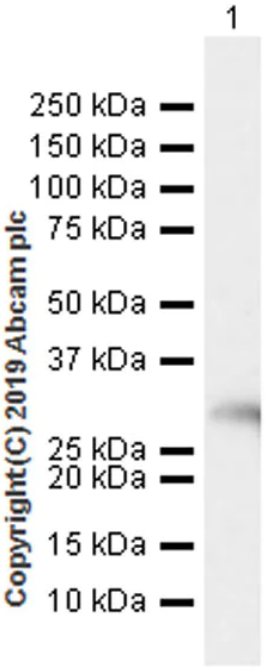
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 8 seconds.

All lanes:
Immunoprecipitation - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637)

Predicted band size: 29 kDa

Observed band size: 32 kDa



Western blot - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637)

Exposure time: 5.5 seconds.
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:
Western blot - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637) at 1/1000 dilution

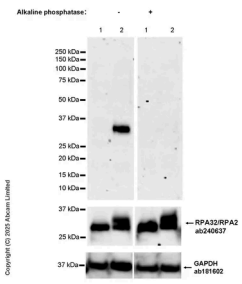
All lanes:
Human brain tissue lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 29 kDa

Observed band size: 32 kDa



Western blot - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637)

RPA32/RPA2 Western blot staining of 293T treated with 1 µM camptothecin for 3 h fresh whole cell lysate (untreated membrane) using rabbit Anti-RPA32/RPA2 antibody

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

The molecular weight of RPA32/RPA2 is upshifted in response to camptothecin treatment (PMID: 17928296).

To minimize protein degradation, cells were lysed immediately after harvest and then applied to a gel and transfer membrane for Western blotting as soon as possible.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36KDa).
All lanes:
Western blot - Anti-RPA32/RPA2 (phospho S33) antibody [EPR29612-551] (ab325750) at 1/1000 dilution

Lane 1:
Untreated 293T (human embryonic kidney epithelial cell) fresh whole cell lysate (untreated membrane) at 50 µg

Lane 2:
293T treated with 1 µM camptothecin for 3 h fresh whole cell lysate (untreated membrane) at 50 µg

Lane 3:
Untreated 293T (human embryonic kidney epithelial cell) fresh whole cell lysate (alkaline phosphatase treated membrane) at 50 µg

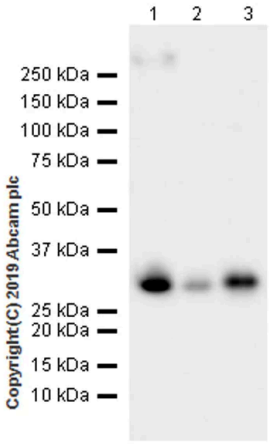
Lane 4:
293T treated with 1 µM camptothecin for 3 h fresh whole cell lysate (alkaline phosphatase treated membrane) at 50 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 32 kDa, 36 kDa, 30 kDa

Exposure time: 180s



Western blot - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637)

RPA32/RPA2 Western blot staining using rabbit Anti-RPA32/RPA2 antibody

Exposure time: 5.5 seconds.
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:
Western blot - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637) at 1/1000 dilution

Lane 1:
HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Lane 2:
HUVEC (human umbilical vein endothelial cell), whole cell lysate at 20 µg

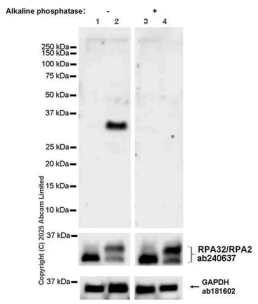
Lane 3:
U-2 OS (human bone osteosarcoma epithelial cell), whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 29 kDa

Observed band size: 32 kDa



Western blot - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637)

RPA32/RPA2 Western blot staining of HeLa treated with 100µM Etoposide for 4h fresh whole cell lysate (untreated membrane) using rabbit Anti-RPA32/RPA2 antibody

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

The molecular weight of RPA32/RPA2 is upshifted in response to Etoposide treatment (PMID: 21731742).

To minimize protein degradation, cells were lysed immediately after harvest and then applied to a gel and transfer membrane for Western blotting as soon as possible.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

In Western blot, Anti-RPA32/RPA2 antibody (ab240637) staining at 1/1000 dilution.

All lanes:
Western blot - Anti-RPA32/RPA2 (phospho S4) antibody [EPR29611-59] (ab325317) at 1/1000 dilution

Lane 1:
Untreated HeLa (human cervical adenocarcinoma epithelial cell) fresh whole cell lysate (untreated membrane) at 50 µg

Lane 2:
HeLa treated with 100µM Etoposide for 4h fresh whole cell lysate (untreated membrane) at 50 µg

Lane 3:
Untreated HeLa fresh whole cell lysate (alkaline phosphatase treated membrane) at 50 µg

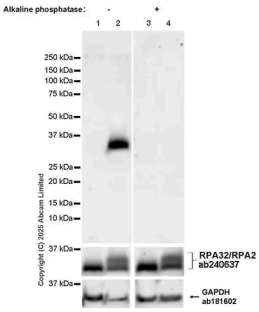
Lane 4:
HeLa treated with 100µM Etoposide for 4h fresh whole cell lysate (alkaline phosphatase treated membrane) at 50 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 32 kDa, 30 kDa, 36 kDa

Exposure time: 26s



Western blot - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637)

RPA32/RPA2 Western blot staining of 293T treated with 1µM camptothecin for 3h fresh whole cell lysate (untreated membrane) using rabbit Anti-RPA32/RPA2 antibody

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

The molecular weight of RPA32/RPA2 is upshifted in response to camptothecin treatment (PMID: 21731742).

To minimize protein degradation, cells were lysed immediately after harvest and then applied to a gel and transfer membrane for Western blotting as soon as possible.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

In Western blot, Anti-RPA32/RPA2 antibody (ab240637) staining at 1/1000 dilution.
All lanes:
Western blot - Anti-RPA32/RPA2 (phospho S4) antibody [EPR29611-59] (ab325317) at 1/1000 dilution

Lane 1:
Untreated 293T (human embryonic kidney epithelial cell) fresh whole cell lysate (untreated membrane) at 50 µg

Lane 2:
293T treated with 1µM camptothecin for 3h fresh whole cell lysate (untreated membrane) at 50 µg

Lane 3:
Untreated 293T (human embryonic kidney epithelial cell) fresh whole cell lysate (alkaline phosphatase treated membrane) at 50 µg

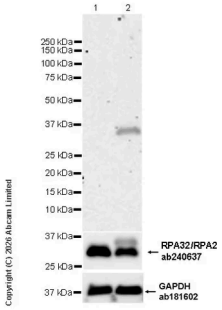
Lane 4:
293T treated with 1µM camptothecin for 3h fresh whole cell lysate (alkaline phosphatase treated membrane) at 50 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 32 kDa, 30 kDa, 36 kDa

Exposure time: 15s



Western blot - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637)

RPA32/RPA2 Western blot staining of HeLa treated with 100 µM Etoposide for 16 hours fresh whole cell lysate using rabbit Anti-RPA32/RPA2 antibody

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

The molecular weight of RPA32/RPA2 is upshifted in response to Etoposide treatment (PMID: 17928296).

To minimize protein degradation, cells were lysed immediately after harvest and then applied to a gel and transfer membrane for Western blotting as soon as possible.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36KDa).

All lanes:
Western blot - Anti-RPA32/RPA2 (phospho S33) antibody [EPR29612-551] (ab325750) at 1/1000 dilution

Lane 1:
Untreated HeLa (human cervical adenocarcinoma epithelial cell) fresh whole cell lysate at 50 µg

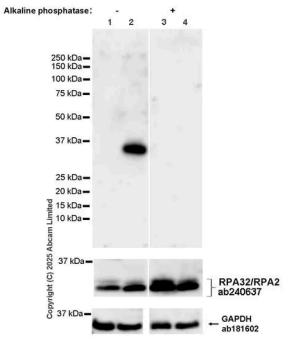
Lane 2:
HeLa treated with 100 µM Etoposide for 16 hours fresh whole cell lysate at 50 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 32 kDa, 36 kDa, 30 kDa

Exposure time: 180s



Western blot - Anti-RPA32/RPA2 antibody [EPR22950-81] (ab240637)

RPA32/RPA2 Western blot staining of NIH/3T3 treated with 1µM camptothecin for 3h fresh whole cell lysate (untreated membrane) using rabbit Anti-RPA32/RPA2 antibody

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

The molecular weight of RPA32/RPA2 is upshifted in response to camptothecin treatment (PMID: 21731742).

To minimize protein degradation, cells were lysed immediately after harvest and then applied to a gel and transfer membrane for Western blotting as soon as possible.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

In Western blot, Anti-RPA32/RPA2 antibody (ab240637) staining at 1/1000 dilution.

All lanes:
Western blot - Anti-RPA32/RPA2 (phospho S4) antibody [EPR29611-59] (ab325317) at 1/1000 dilution

Lane 1:
Untreated NIH/3T3 (mouse embryonic fibroblast) fresh whole cell lysate (untreated membrane) at 50 µg

Lane 2:
NIH/3T3 treated with 1µM camptothecin for 3h fresh whole cell lysate (untreated membrane) at 50 µg

Lane 3:
Untreated NIH/3T3 fresh whole cell lysate (alkaline phosphatase treated membrane) at 50 µg

Lane 4:
NIH/3T3 treated with 1µM camptothecin for 3h fresh whole cell lysate (alkaline phosphatase treated membrane) at 50 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 32 kDa, 30 kDa, 36 kDa

Exposure time: 26s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.