abcam

Product datasheet

Anti-PARP1 antibody [EPR18461] ab191217

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-PARP1 antibody [EPR18461]
Description	Rabbit monoclonal [EPR18461] to PARP1
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide within Human PARP1 aa 700-800. The exact sequence is proprietary. Database link: P09874
Positive control	WB: HeLa and NIH/3T3 whole cell lysates; Human fetal heart and fetal kidney lysates; Mouse heart lysate; Rat brain and heart lysates. IHC-P: Human, mouse and rat testis tissues. ICC/IF: HeLa and NIH/3T3 cells.
General notes	Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents. This product is a recombinant rabbit monoclonal antibody.

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 long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR18461
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab191217** in the following tested applications.

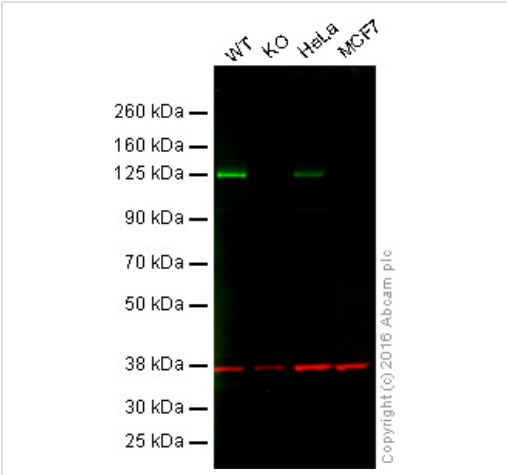
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★☆☆	1/1000. Detects a band of approximately 113, 89, 55 kDa (predicted molecular weight: 113 kDa).
IHC-P		1/1000.
ICC/IF	★★★★★	1/500.

Target

Function	Involved in the base excision repair (BER) pathway, by catalyzing the poly(ADP-ribosyl)ation of a limited number of acceptor proteins involved in chromatin architecture and in DNA metabolism. This modification follows DNA damages and appears as an obligatory step in a detection/signaling pathway leading to the reparation of DNA strand breaks. Mediates the poly(ADP-ribosyl)ation of APLF and CHFR. Positively regulates the transcription of MTUS1 and negatively regulates the transcription of MTUS2/TIP150.
Sequence similarities	Contains 1 BRCT domain. Contains 1 PARP alpha-helical domain. Contains 1 PARP catalytic domain. Contains 2 PARP-type zinc fingers.
Post-translational modifications	Phosphorylated by PRKDC. Phosphorylated upon DNA damage, probably by ATM or ATR. Poly-ADP-ribosylated by PARP2. Poly-ADP-ribosylation mediates the recruitment of CHD1L to DNA damage sites. S-nitrosylated, leading to inhibit transcription regulation activity.
Cellular localization	Nucleus.

Images



Western blot - Anti-PARP1 antibody [EPR18461] (ab191217)

Lane 1: Wild type HAP1 whole cell lysate (20 µg)

Lane 2: PARP1 knockout HAP1 whole cell lysate (20 µg)

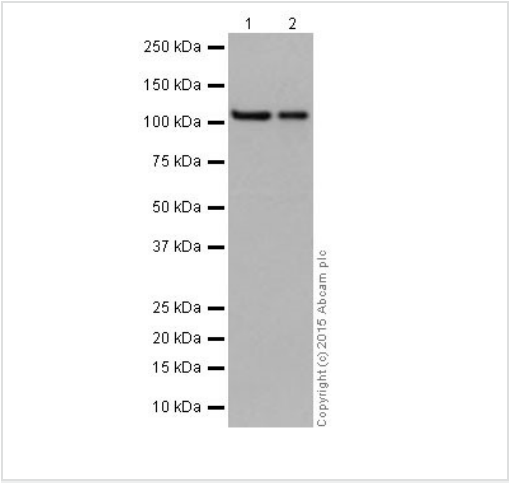
Lane 3: HeLa whole cell lysate (20 µg)

Lane 4: MCF7 whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab191217 observed at 125 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab191217 was shown to specifically react with PARP1 when PARP1 knockout samples were used. Wild-type and PARP1 knockout samples were subjected to SDS-PAGE. ab191217 and ab8245 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/10000 dilution respectively. Blots were developed with 800CW Goat anti Rabbit and 680CW Goat anti Mouse secondary antibodies at 1/10000

dilution for 1 hour at room temperature before imaging.



Western blot - Anti-PARP1 antibody [EPR18461] (ab191217)

All lanes : Anti-PARP1 antibody [EPR18461] (ab191217) at 1/1000 dilution

Lane 1 : Rat brain lysate
Lane 2 : Rat heart lysate

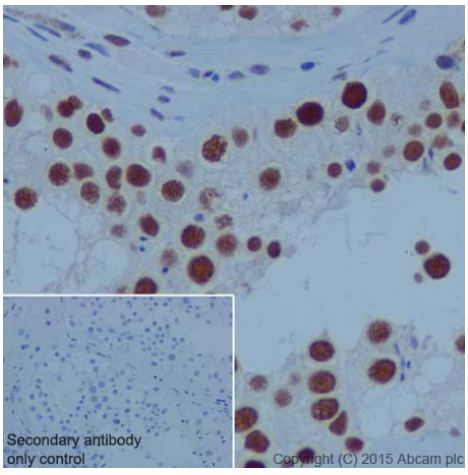
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/50000 dilution

Predicted band size: 113 kDa
Observed band size: 113 kDa

Exposure time: 15 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.



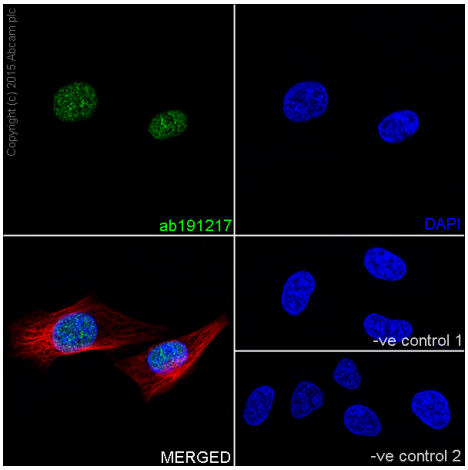
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PARP1 antibody [EPR18461] (ab191217)

Immunohistochemical analysis of paraffin-embedded Human testis tissue labeling PARP1 with ab191217 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Nucleus staining on epithelial cells and stromal cells of Human testis is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.



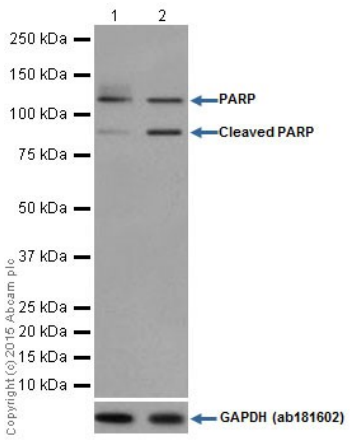
Immunocytochemistry/ Immunofluorescence - Anti-PARP1 antibody [EPR18461] (ab191217)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling PARP1 with ab191217 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).

Confocal image showing nuclear staining on HeLa cell line. The nuclear counterstain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) secondary antibody at 1/1000 dilution (red).

The negative controls are as follows:-
-ve control 1: ab191217 at 1/500 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (ab150120) secondary antibody at 1/1000 dilution.
-ve control 2: Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



Western blot - Anti-PARP1 antibody [EPR18461] (ab191217)

All lanes : Anti-PARP1 antibody [EPR18461] (ab191217) at 1/10000 dilution

Lane 1 : Untreated HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysates
Lane 2 : HeLa (Human epithelial cells from cervix adenocarcinoma) treated with 1uM staurosporine for 4 hours whole cell lysates

Lysates/proteins at 10 µg per lane.

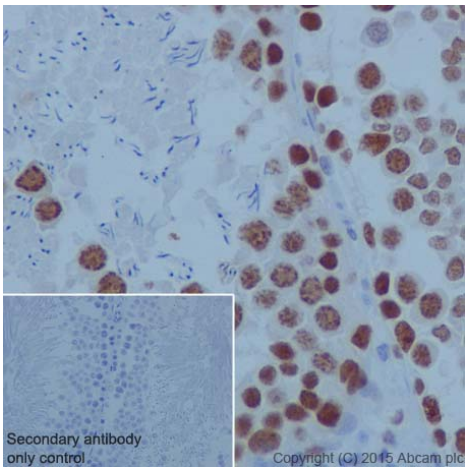
Secondary
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/50000 dilution

Predicted band size: 113 kDa
Observed band size: 113,89 kDa
why is the actual band size different from the predicted?

Exposure time: 5 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.

The expression profile observed is consistent with what has been described in the literature (PMID: 1536009).



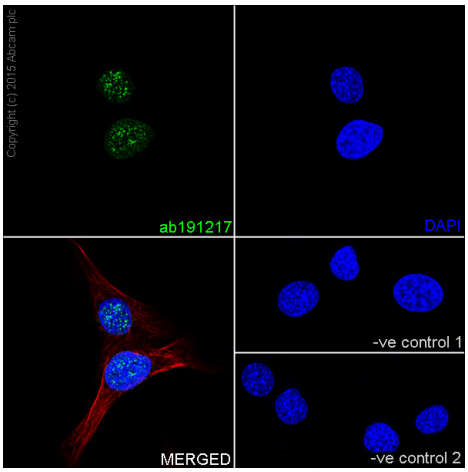
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PARP1 antibody [EPR18461] (ab191217)

Immunohistochemical analysis of paraffin-embedded Rat testis tissue labeling PARP1 with ab191217 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Nucleus staining on epithelial cells and stromal cells of rat testis is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.



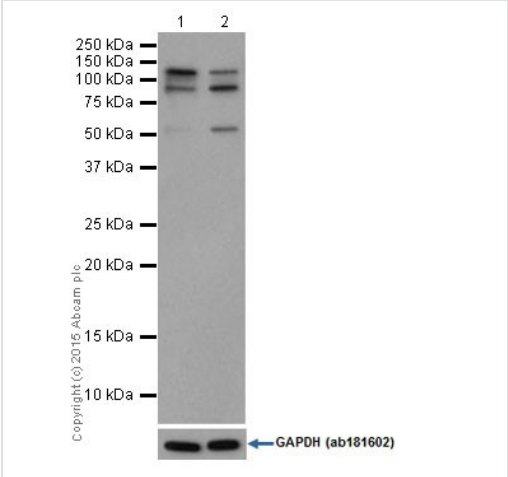
Immunocytochemistry/ Immunofluorescence - Anti-PARP1 antibody [EPR18461] (ab191217)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (Mouse embryonic fibroblast cells) cells labeling PARP1 with ab191217 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).

Confocal image showing nuclear staining on NIH/3T3 cell line. The nuclear counterstain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) at 1/1000 dilution (red).

The negative controls are as follows:-
-ve control 1: ab191217 at 1/500 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) at 1/1000 dilution.
-ve control 2: Anti-alpha Tubulin mouse MAb (ab7291) at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



Western blot - Anti-PARP1 antibody [EPR18461] (ab191217)

All lanes : Anti-PARP1 antibody [EPR18461] (ab191217) at 1/10000 dilution

Lane 1 : Untreated NIH/3T3 (Mouse embryonic fibroblast cells) whole cell lysates
Lane 2 : NIH/3T3 (Mouse embryonic fibroblast cells) treated with 1uM staurosporine for 4 hours whole cell lysates

Lysates/proteins at 10 µg per lane.

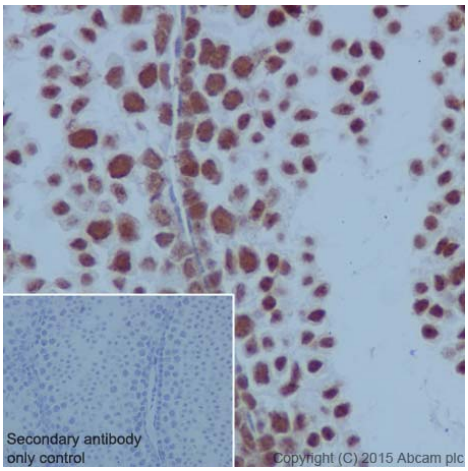
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 113 kDa
Observed band size: 113,55,89 kDa why is the actual band size different from the predicted?

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.

The expression profile observed is consistent with what has been described in the literature (PMID: 1536009).



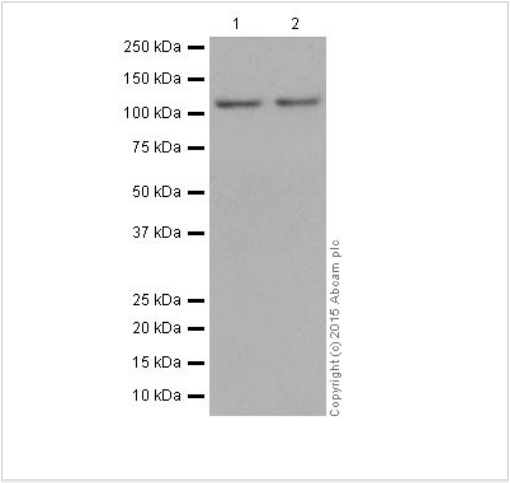
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PARP1 antibody [EPR18461] (ab191217)

Immunohistochemical analysis of paraffin-embedded Mouse testis tissue labeling PARP1 with ab191217 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Nucleus staining on epithelial cells and stromal cells of mouse testis is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.



Western blot - Anti-PARP1 antibody [EPR18461] (ab191217)

All lanes : Anti-PARP1 antibody [EPR18461] (ab191217) at 1/1000 dilution

Lane 1 : Human fetal heart lysate
Lane 2 : Human fetal kidney lysate

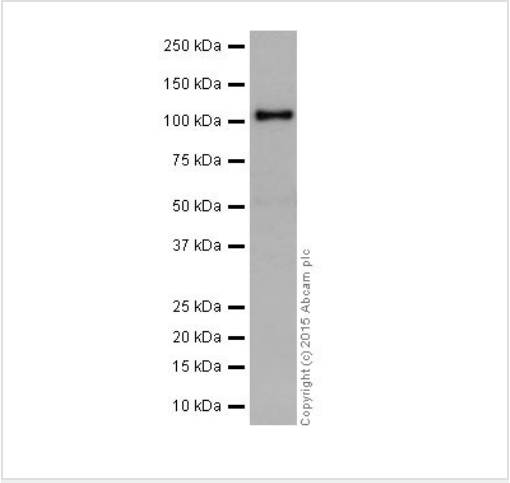
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/50000 dilution

Predicted band size: 113 kDa
Observed band size: 113 kDa

Exposure time: 15 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-PARP1 antibody [EPR18461] (ab191217)

Anti-PARP1 antibody [EPR18461] (ab191217) at 1/1000 dilution + Mouse heart lysate at 10 µg

Secondary
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/50000 dilution

Predicted band size: 113 kDa
Observed band size: 113 kDa

Exposure time: 1 minute

Blocking/Dilution buffer: 5% NFDM/TBST.

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