

## Product datasheet

# Anti-Cleaved PARP1 antibody [E51] ab32064

**KO VALIDATED** Recombinant RabMAB<sup>®</sup>

★★★★☆ 7 Abreviews 44 References 11 Images

### Overview

<b>Product name</b>	Anti-Cleaved PARP1 antibody [E51]
<b>Description</b>	Rabbit monoclonal [E51] to Cleaved PARP1
<b>Specificity</b>	This antibody is specific for the p25 cleaved form of human PARP1.
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P <b>Unsuitable for:</b> ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human <b>Predicted to work with:</b> Chinese hamster
<b>Immunogen</b>	Synthetic peptide within Human Cleaved PARP1 aa 150-250. The exact sequence is proprietary.
<b>Positive control</b>	Jurkat cells.
<b>General notes</b>	A trial size is available to purchase for this antibody. Our RabMAB <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMab<sup>®</sup> patents</a> <b>We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.</b> This product is a recombinant rabbit monoclonal antibody.

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
<b>Purity</b>	Protein A purified

<b>Clonality</b>	Monoclonal
<b>Clone number</b>	E51
<b>Isotype</b>	IgG

## Applications

Our [Abpromise guarantee](#) covers the use of **ab32064** 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 - 1/10000. Predicted molecular weight: 25 kDa.
IHC-P	★★★★☆	1/100.

**Application notes** Is unsuitable for ICC/IF.

## Target

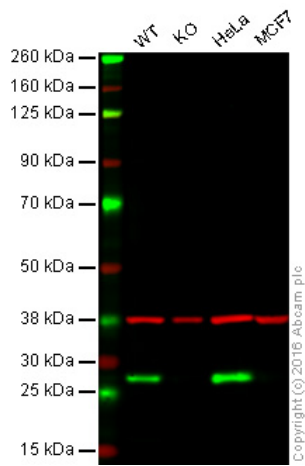
**Function** Involved in the base excision repair (BER) pathway, by catalyzing the poly(ADP-ribosyl)ation of a limited number of acceptor proteins involved in chromatin architecture and in DNA metabolism. This modification follows DNA damages and appears as an obligatory step in a detection/signaling 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. With EEF1A1 and TXK, forms a complex that acts as a T-helper 1 (Th1) cell-specific transcription factor and binds the promoter of IFN-gamma to directly regulate its transcription, and is thus involved importantly in Th1 cytokine production. Required for PARP9 and DTX3L recruitment to DNA damage sites. PARP1-dependent PARP9-DTX3L-mediated ubiquitination promotes the rapid and specific recruitment of 53BP1/TP53BP1, UIMC1/RAP80, and BRCA1 to DNA damage sites.

**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 and TXK.  
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. Nucleus, nucleolus. Localizes at sites of DNA damage.

## Images



Western blot - Anti-Cleaved PARP1 antibody [E51] (ab32064)

**Predicted band size : 25 kDa**

**Lane 1:** Wild type HAP1 whole cell lysate (20  $\mu$ g)

**Lane 2:** PARP1 knockout HAP1 whole cell lysate (20  $\mu$ g)

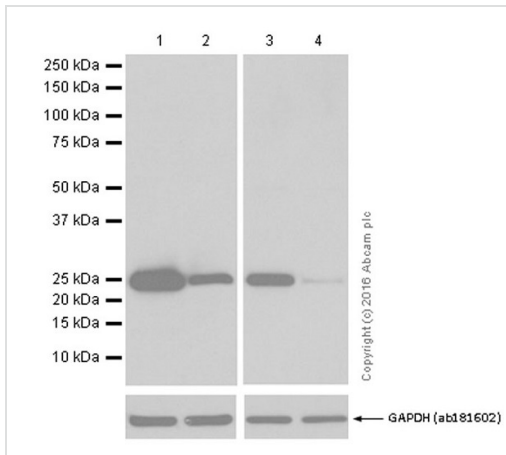
**Lane 3:** HeLa whole cell lysate (20  $\mu$ g)

**Lane 4:** MCF7 whole cell lysate (20  $\mu$ g)

**Lanes 1 - 4:** Merged signal (red and green).

Green - ab32064 observed at 30 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab32064 was shown to specifically react with PARP1 when PARP1 knockout samples were used. Wild-type and PARP1 knockout samples were subjected to SDS-PAGE. Ab32064 and ab8245 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/10000 dilutions. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) ab216773 and 680CW Goat anti Mouse secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-Cleaved PARP1 antibody [E51] (ab32064)

**All lanes :** Anti-Cleaved PARP1 antibody [E51] (ab32064) at 1/1000 dilution

**Lane 1 :** HeLa treated with 1uM Staurosporine for 3 hours whole cell lysates

**Lane 2 :** Untreated HeLa whole cell lysates

**Lane 3 :** NIH/3T3 treated with 1uM Staurosporine for 3 hours whole cell lysates

**Lane 4 :** Untreated NIH/3T3 whole cell lysates

Lysates/proteins at 20 µg per lane.

**Secondary**

Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

**Predicted band size :** 25 kDa

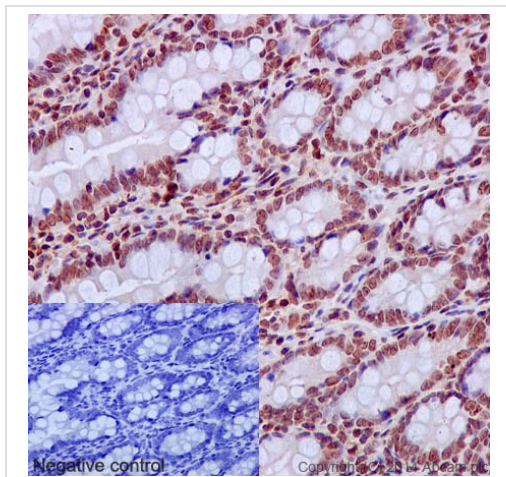
**Observed band size :** 25 kDa

Blocking/Dilution buffer 5% NFD/MTBST

**Exposure time :**

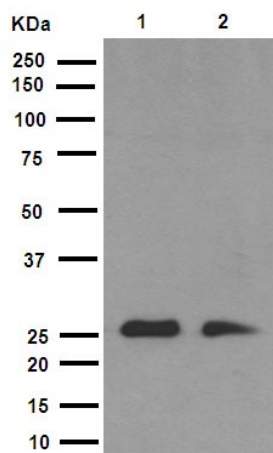
Lane 1,2: 1 second

Lane 3,4: 8 seconds



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cleaved PARP1 antibody [E51] (ab32064)

Immunohistochemical staining of paraffin embedded rat colon with purified ab32064 at a working dilution of 1/100. The secondary antibody used is a HRP polymer for rabbit IgG. The sample is counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.



Western blot - Anti-Cleaved PARP1 antibody [E51]  
(ab32064)

**All lanes :** Anti-Cleaved PARP1 antibody

[E51] (ab32064) at 1/1000 dilution

**Lane 1 :** RAW264.7 cell lysate

**Lane 2 :** NIH/3T3 cell lysate

Lysates/proteins at 20 µg per lane.

**Secondary**

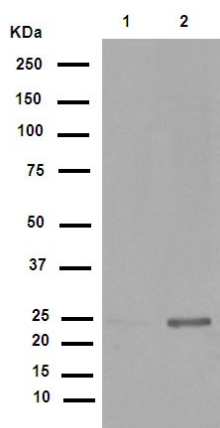
HRP goat anti-rabbit (H+L) at 1/1000 dilution

**Predicted band size :** 25 kDa

**Observed band size :** 25 kDa

Blocking buffer: 5% NFDm/TBST

Dilution buffer: 5% NFDm/TBST



Camptothecin : - +

Western blot - Anti-Cleaved PARP1 antibody [E51]  
(ab32064)

**All lanes :** Anti-Cleaved PARP1 antibody

[E51] (ab32064) at 1/10000 dilution

**Lane 1 :** Untreated Jurkat cell lysate

**Lane 2 :** Jurkat cell lysate treated with  
camptothecin

Lysates/proteins at 10 µg per lane.

**Secondary**

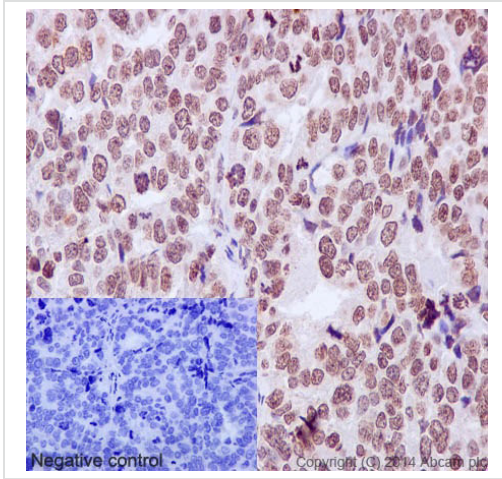
HRP goat anti-rabbit (H+L) at 1/1000 dilution

**Predicted band size :** 25 kDa

**Observed band size :** 25 kDa

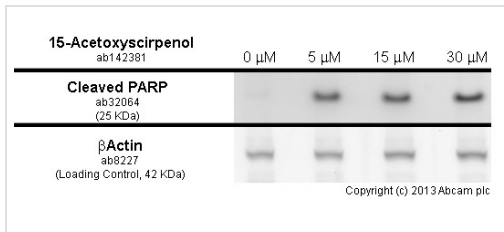
Blocking buffer: 5% NFDm/TBST

Dilution buffer: 5% NFDm/TBST



Immunohistochemical staining of paraffin embedded human ovarian carcinoma with purified ab32064 at a working dilution of 1 in 100. The secondary antibody used is a HRP polymer for rabbit IgG. The sample is counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cleaved PARP1 antibody [E51] (ab32064)



Western blot - Anti-Cleaved PARP1 antibody [E51]  
(ab32064)

Developed using the ECL technique

Performed under reducing conditions.

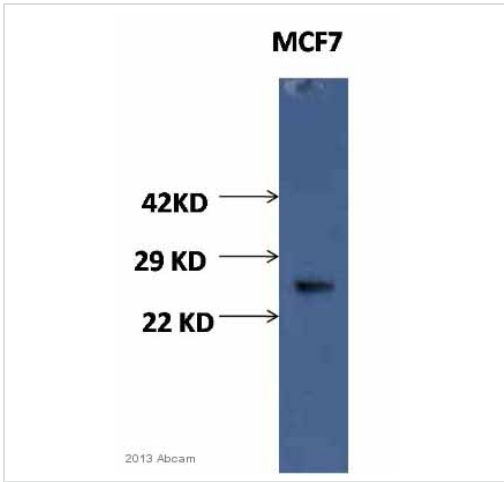
**Predicted band size** : 25 kDa

**Observed band size** : 25 kDa

**Exposure time** : 10 seconds

Jurkat cells were incubated at 37°C for 24 hours with vehicle control (0  $\mu$ M) and different concentrations of 15-Acetoxy-scirpenol (ab142381). Increased expression of cleaved PARP1 (ab32064) in Jurkat cells correlates with an increase in 15-Acetoxy-scirpenol concentration, as described in literature.

Whole cell lysates were prepared with RIPA buffer (containing protease inhibitors and sodium orthovanadate), 20 $\mu$ g of each were loaded on the gel and the WB was run under reducing conditions. After transfer the membrane was blocked for an hour using 5% BSA before being incubated with ab32064 at 1/10000 dilution and ab8227 at 1  $\mu$ g/ml overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP (ab97051) at 1/10000 and visualised using ECL development solution.



Western blot - Anti-Cleaved PARP1 antibody [E51] (ab32064)

This image is courtesy of an anonymous Abreview

Anti-Cleaved PARP1 antibody [E51] (ab32064) at 1/50000 dilution + MCF7 cell lysate at 100 µg

**Secondary**

HRP-conjugated Goat anti-rabbit IgG polyclonal at 1/50000 dilution  
Developed using the ECL technique

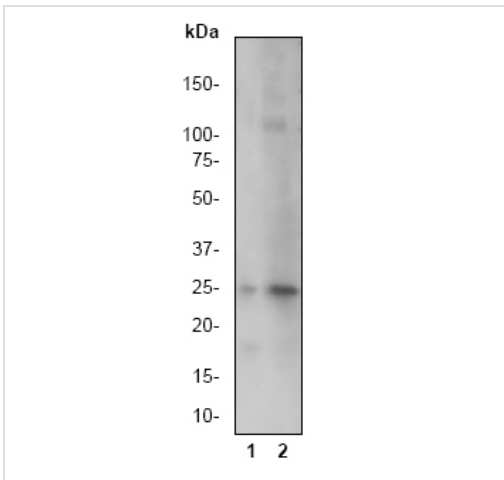
Performed under reducing conditions.

**Predicted band size** : 25 kDa

**Observed band size** : 25 kDa

**Exposure time** : 15 minutes

*This image is courtesy of an anonymous Abreview*



Western blot - Anti-Cleaved PARP1 antibody [E51] (ab32064)

**All lanes** : Anti-Cleaved PARP1 antibody [E51] (ab32064) at 1/1000000 dilution

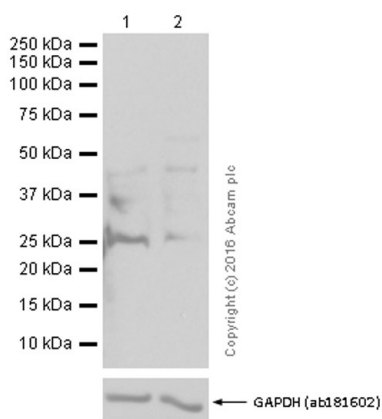
**Lane 1** : Jurkat cell lysate. Untreated.

**Lane 2** : Jurkat cell lysate. Treated with Camptothecin.

**Predicted band size** : 25 kDa

**Observed band size** : 25 kDa





Western blot - Anti-Cleaved PARP1 antibody [E51] (ab32064)

**All lanes :** Anti-Cleaved PARP1 antibody

[E51] (ab32064) at 1/1000 dilution

**Lane 1 :** PC-12 treated with 1uM

Staurosporine for 3 hours whole cell lysates

**Lane 2 :** Untreated PC-12 whole cell lysates

Lysates/proteins at 20 µg per lane.

### Secondary

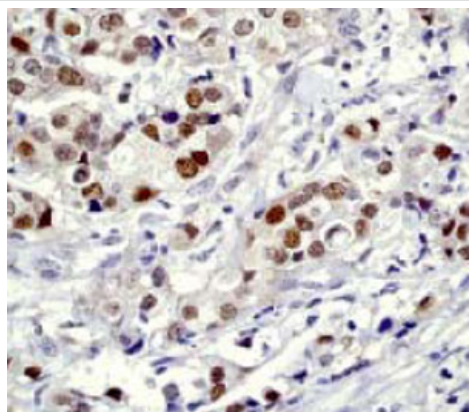
Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

**Predicted band size :** 25 kDa

**Observed band size :** 25 kDa

**Exposure time :** 30 seconds

Blocking/Diluting buffer 5% NFDm/TBST



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cleaved PARP1 antibody [E51] (ab32064)

Immunohistochemical staining of paraffin embedded human breast carcinoma with unpurified ab32064 at a 1/100 dilution.

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