abcam

Product datasheet

Anti-Cleaved PARP1 antibody [Y34] ab32561

KO VALIDATED Recombinant RabMAb

1 Abreviews 29 References 5 Images

Overview

Product name	Anti-Cleaved PARP1 antibody [Y34]
Description	Rabbit monoclonal [Y34] to Cleaved PARP1
Host species	Rabbit
Specificity	This antibody is specific for p85 cleaved form of PARP1.
Tested applications	**Suitable for:** IHC-P, WB, Flow Cyt, IP, ICC/IF
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide within Human Cleaved PARP1 aa 200-300. The exact sequence is proprietary. Residues following the cleavage of site.
Positive control	Jurkat whole cell lysate (ab7899).
General notes	A trial size is available to purchase for this antibody. Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information. 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. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 49% PBS, 50% Glycerol, 0.05% BSA
Purity	IgG fraction
Clonality	Monoclonal
Clone number	Y34
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab32561** in the following tested applications.

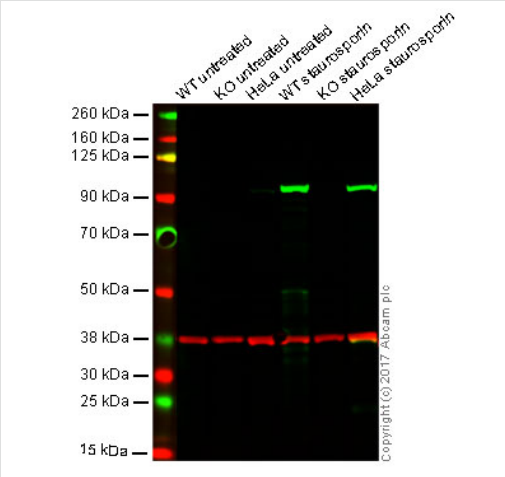
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration. PubMed: 21931707
WB		1/1000. Predicted molecular weight: 85 kDa.
Flow Cyt		1/50. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
IP		1/50.
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. 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

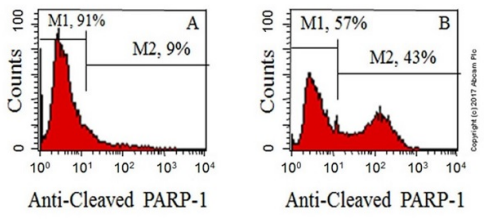


Western blot - Anti-Cleaved PARP1 antibody [Y34] (ab32561)

Lane 1: Wild type HAP1 (untreated) whole cell lysate (20 µg)
Lane 2: PARP1 (untreated) knockout HAP1 (untreated) whole cell lysate (20 µg)
Lane 3: HeLa (untreated) whole cell lysate (20 µg)
Lane 4: HAP1 (staurosporin treated, 1 u M, 4 hr) whole cell lysate (20 µg)
Lane 5: PARP1 (staurosporin treated, 1 uM, 4 hr) knockout HAP1 whole cell lysate (20 µg)
Lane 6: HeLa (staurosporin treated, 1 uM, 4 hr) whole cell lysate (20 µg)

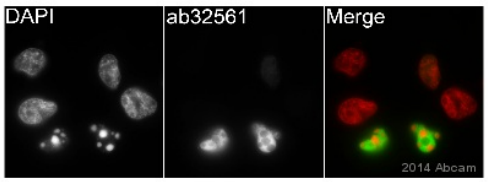
Lanes 1 - 6: Merged signal (red and green). Green - ab32561 observed at 100 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab32561 was shown to specifically react with PARP1 (untreated) when PARP1 (untreated) knockout samples were used. Wild-type and PARP1 (untreated) knockout samples were subjected to SDS-PAGE. Ab32561 and ab8245 (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1000 dilution and 1/10000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



Flow Cytometry - Anti-Cleaved PARP1 antibody [Y34] (ab32561)

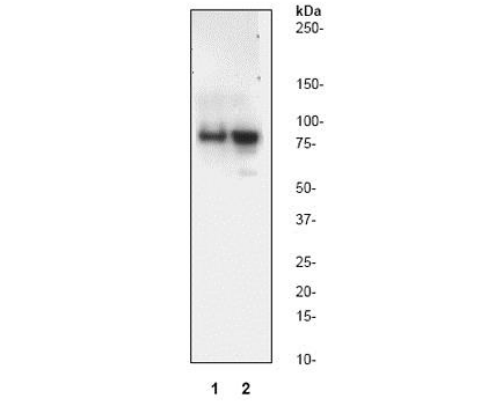
Primary ab 1/50 dilution (0.5µg / Red). Secondary ab Goat anti rabbit IgG (FITC). Secondary ab concentration 1/150 dilution. Cell line Jurkat (human acute T cell leukemia) treated with (Right) or without (Left) 4µM Camptothecin for 5h. Fixative 4% paraformaldehyde. Datasheet comment Flow cytometric analysis of apoptotic and non-apoptotic Jurkat cells using anti-cleaved PARP1 RabMAb (ab32561). Jurkat cells were either left untreated (A) or treated with camptothecin (4 uM, 5 hr) to induce apoptosis (B). Cells were fixed and permeabilized, and then stained with anti-cleaved PARP1. The results indicate that 43% of cells were positive for cleaved PARP1 (B, M2) after treatment, compared to 9% positive without treatment (A, M2).



Immunocytochemistry/ Immunofluorescence - Anti-Cleaved PARP1 antibody [Y34] (ab32561)

This image is courtesy of an anonymous Abreview

ab32561 staining Cleaved PARP1 in HeLa cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with formaldehyde and permeabilized with 0.5% Triton X-100 in PBS. Samples were incubated with primary antibody (1/500 in PBS) for 1 hour at 22°C. ab150081, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG polyclonal (1/200) was used as the secondary antibody. Counterstained with DAPI.

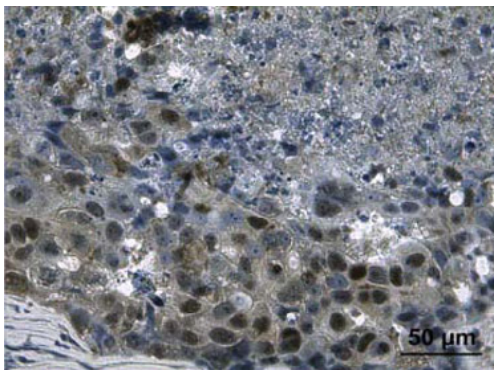


Western blot - Anti-Cleaved PARP1 antibody [Y34] (ab32561)

All lanes : Anti-Cleaved PARP1 antibody [Y34] (ab32561) at 1/1000 dilution

Lane 1 : Un-treated Jurkat cell lysate.
Lane 2 : Jurkat cell lysate treated with Camptothecin.

Predicted band size: 85 kDa
Observed band size: 85 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cleaved PARP1 antibody [Y34] (ab32561)

Image from Wang L et al., PLoS One. 2011;6(9):e24405. Epub 2011 Sep 9. Fig 6.; doi:10.1371/journal.pone.0024405; September 9, 2011, PLoS ONE 6(9): e24405.

Immunohistochemical analysis of OVCAR-3 tumour xenografts in nude mice, staining cleaved PARP1 with ab32561.

Antigen retrieval was performed via heat mediation in a citrate buffer. Samples were incubated with primary antibody (1/100) overnight at 4°C. A biotinyated anti-rabbit IgG (1/150) was used as the secondary antibody and staining was detected using DAB.

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