abcam

Product datasheet

Anti-PARP1 antibody [E102] ab32138

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-PARP1 antibody [E102]
Description	Rabbit monoclonal [E102] to PARP1
Specificity	ab32138 recognises both pro-form and p25 cleaved form of PARP1.
Tested applications	**Suitable for:** WB, IHC-P, Flow Cyt, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide within Human PARP1 (N terminal). The exact sequence is proprietary.
Positive control	WB: Jurkat cell lysate. IHC-P: Human brain tissue.
General notes	A trial size is available to purchase for this antibody. 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. Avoid freeze / thaw cycle.
Storage buffer	PBS 49%,Sodium azide 0.01%,Glycerol 50%,BSA 0.05%
Purity	IgG fraction
Clonality	Monoclonal
Clone number	E102
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab32138** in the following tested applications.

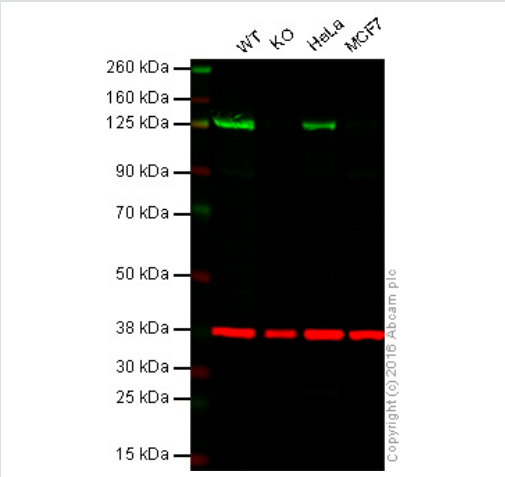
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★	1/1000 - 1/10000. Predicted molecular weight: 113 kDa. Existing as a 113 kDa nuclear protein, PARP1 is cleaved between amino acids Asp214 and Gly215 to yield two fragments of 29 kDa (N-terminal catalytic domain) and 85 kDa (C-terminal DNA-binding domain)
IHC-P	★★★★☆	1/25.
Flow Cyt		1/50. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
ICC/IF	★★★★☆	1/100 - 1/200. Use with paraformaldehyde fixed cells.

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 [E102] (ab32138)

Predicted band size : 113 kDa

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

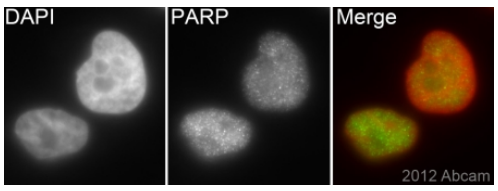
Lane 2: PARP1 knockout HAP1 whole cell lysate (20 µg)

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 - ab32138 observed at 125 kDa. Red - loading control, ab8245, observed at 37 kDa.

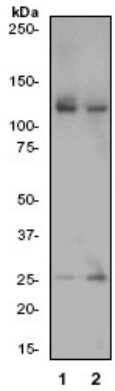
ab32138 was shown to specifically react with PARP1 when PARP1 knockout samples were used. Wild-type and PARP1 knockout samples were subjected to SDS-PAGE. ab32138 and ab8245 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/10 000 dilution respectively. Blots were developed with 800CW Goat anti Rabbit and 680CW Goat anti Mouse secondary antibodies at 1/10 000 dilution for 1 hour at room temperature before imaging.



Immunocytochemistry/ Immunofluorescence - Anti-PARP1 antibody [E102] (ab32138)

Image courtesy of an Abreview submitted by Dr. Kirk McManus, Univ. of Manitoba/Cancer Care MICB, Canada

ab32138 (1/200) staining PARP1 in HeLa cells (green). Cells were fixed in paraformaldehyde, permeabilised in 0.5% Triton X100/PBS and counterstained with DAPI in order to highlight the nucleus (red). For further experimental details please refer to Abreview.

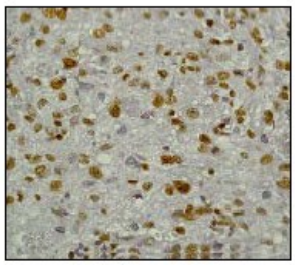


Western blot - Anti-PARP1 antibody [E102] (ab32138)

All lanes : Anti-PARP1 antibody [E102] (ab32138) at 1/1000 dilution

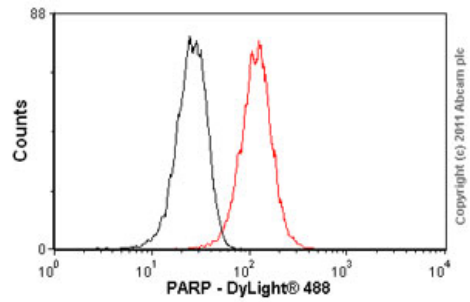
Lane 1 : Jurkat cell lysate
Lane 2 : Jurkat + Camptothecin cell lysate

Predicted band size : 113 kDa
Observed band size : 25,120 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PARP1 antibody [E102] (ab32138)

Immunohistochemical analysis of PARP1 expression in paraffin embedded human brain tissue section, using 1/25 ab32138.



Flow Cytometry - Anti-PARP1 antibody [E102] (ab32138)

Overlay histogram showing Jurkat cells stained with ab32138 (red line). The cells were fixed with methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab32138, 1/50 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1:500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit monoclonal IgG (0.5µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a decreased signal in Jurkat cells fixed with 4% paraformaldehyde (10 min)/permeabilized in 0.1% PBS-Tween used under the same conditions.

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