abcam

Product datasheet

Anti-PARP antibody [E102] ab32138

KO VALIDATED RabMAb

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Overview

Product name	Anti-PARP antibody [E102]
Description	Rabbit monoclonal [E102] to PARP
Specificity	ab32138 recognises both pro-form and p25 cleaved form of PARP.
Tested applications	**Suitable for:** WB, IHC-P, Flow Cyt, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide (the amino acid sequence is considered to be commercially sensitive) within Human PARP (N terminal). The exact sequence is proprietary.
Positive control	Jurkat cell lysate, human brain tissue
General notes	This product is a recombinant rabbit monoclonal antibody. Produced using Abcam's RabMAb® technology. RabMAb® technology is covered by the following U.S. Patents, No. 5,675,063 and/or 7,429,487. A trial size is available to purchase for this 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.

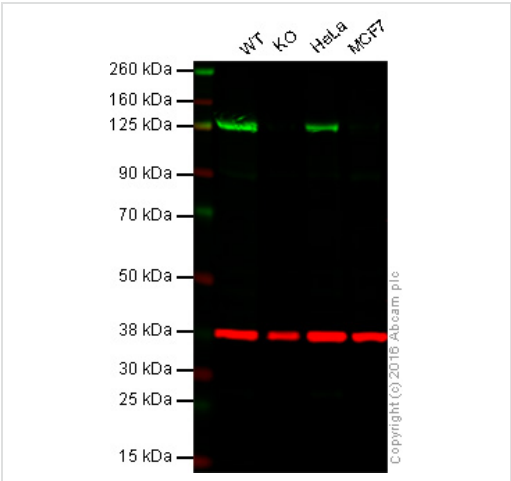
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★	1/1000 - 1/10000. Predicted molecular weight: 113 kDa. Existing as a 113 kDa nuclear protein, PARP is cleaved between amino acids Asp214 and Gly215 to yield two fragments of 29 kDa (C-terminal catalytic domain) and 85 kDa (N-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.

Anti-PARP antibody [E102] images



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

Predicted band size : 113 kDa

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

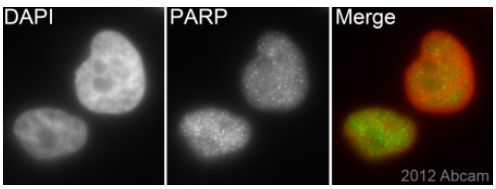
Lane 2: PARP1 knockout HAP1 whole cell lysate (20 µg)

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.

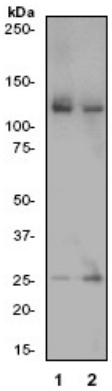
ab32138 was shown to specifically react with PARP1 when PARP1 knockout samples were used. Wild-type and PARP1 knockout samples were subjected to SDS-PAGE. Ab32138 and ab8245 (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/10 000 dilution respectively. Blots 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-PARP antibody [E102] (ab32138)

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

ab32138 (1/200) staining PARP 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-PARP antibody [E102] (ab32138)

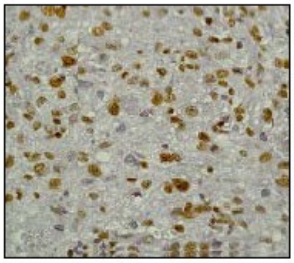
All lanes : Anti-PARP antibody [E102] (ab32138) at 1/1000 dilution

Lane 1 : Jurkat cell lysate

Lane 2 : Jurkat + Camptothecin cell lysate

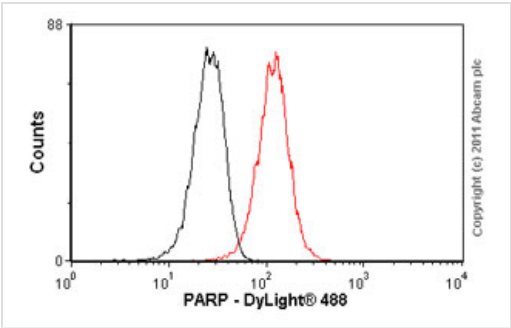
Predicted band size : 113 kDa

Observed band size : 25,120 kDa



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

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



Flow Cytometry - Anti-PARP 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.