


Product datasheet

Alexa Fluor® 488 Anti-Cleaved PARP1 antibody [4B5BD2] ab170171

2 Images

Overview

Product name	Alexa Fluor® 488 Anti-Cleaved PARP1 antibody [4B5BD2]
Description	Alexa Fluor® 488 Mouse monoclonal [4B5BD2] to Cleaved PARP1
Host species	Mouse
Conjugation	Alexa Fluor® 488. Ex: 495nm, Em: 519nm
Tested applications	Suitable for: ICC, Flow Cyt (Intra)
Species reactivity	Reacts with: Human Predicted to work with: Chinese hamster  Does not react with: Mouse, Rat, Cow
Immunogen	Synthetic peptide within Human Cleaved PARP1 aa 200-300 (N terminal). The exact sequence is proprietary. Database link: P09874
Positive control	HeLa cells treated with 1 µM staurosporine for 4 hours.
General notes	Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@thermofisher.com .

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be

found below, along with publications, customer reviews and Q&As

Product was previously marketed under the MitoSciences sub-brand.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Avoid freeze / thaw cycle. Stable for 12 months at -20°C. Store In the Dark.
Storage buffer	Preservative: 0.02% Sodium azide Constituents: 30% Glycerol (glycerin, glycerine), 1% BSA, 68% PBS
Purity	Ammonium Sulphate Precipitation
Clonality	Monoclonal
Clone number	4B5BD2
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab170171 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
ICC		Use a concentration of 1 µg/ml. Use Antigen Retrieval Buffer (100 mM Tris, 5% urea, pH 9.5) at 95°C for 10 min to boost signal.
Flow Cyt (Intra)		Use a concentration of 1 µg/ml. <u>ab171463</u> - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

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.

Post-translational modifications

Contains 1 PARP catalytic domain.

Contains 2 PARP-type zinc fingers.

Phosphorylated by PRKDC and TXK.

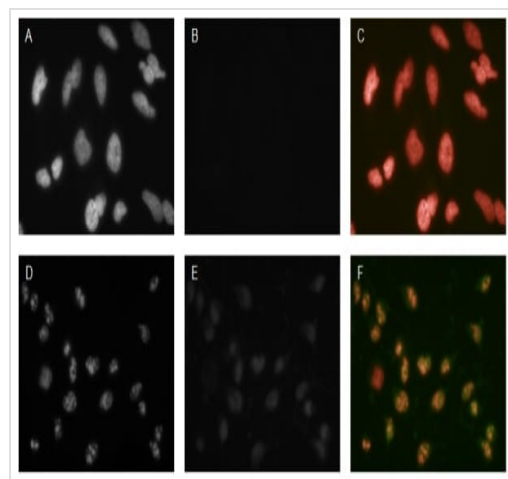
Poly-ADP-ribosylated by PARP2. Poly-ADP-ribosylation mediates the recruitment of CHD1L to DNA damage sites.

S-nitrosylated, leading to inhibit transcription regulation activity.

Cellular localization

Nucleus. Nucleus, nucleolus. Localizes at sites of DNA damage.

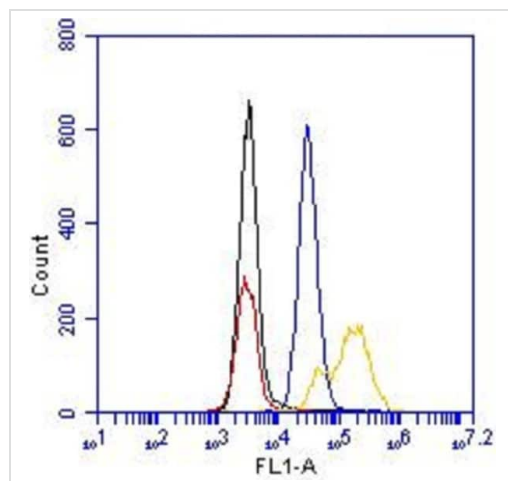
Images



Immunocytochemistry - Alexa Fluor® 488 Anti-Cleaved PARP1 antibody [4B5BD2] (ab170171)

Immunocytochemistry with anti-cleaved PARP1 antibody conjugated to Alexa Fluor® 488.

HeLa cells were vehicle-treated (panels A-C) or treated with 1 μ M staurosporine for 4 hours (panels D-F), then fixed. Cells were treated with antigen retrieval buffer (100 mM Tris, 5% urea, pH 9.5) for 10 minutes at 95°C, then permeabilized and blocked. Cells were incubated with 1 μ g/mL of the cleaved PARP1 antibody conjugated to Alexa Fluor® 488, then co-stained with the DNA stain DAPI. Images of DAPI signals (A and D), anti-cleaved PARP1 signal (B and E), and overlays of DAPI (artificially colored red for better contrast) and anti-cleaved PARP1 (colored green) images (C and F) are shown.



Flow Cytometry (Intracellular) - Alexa Fluor® 488 Anti-Cleaved PARP1 antibody [4B5BD2] (ab170171)

Flow cytometry with anti-cleaved PARP1 antibody conjugated to Alexa Fluor® 488.

Flow cytometric analysis was performed on HeLa vehicle-treated cells and on HeLa cells treated with 1 μ M staurosporine for 4 hours. Cells were fixed with paraformaldehyde and permeabilized with methanol. HeLa vehicle-treated cells were stained with 1 μ g/mL of the cleaved PARP1 antibody conjugated to Alexa488 (blue) or a negative, nonreactive Alexa Fluor® 488-conjugated control antibody (black). HeLa staurosporine-treated cells were stained with 1 μ g/mL of the cleaved PARP1 antibody conjugated to Alexa Fluor® 488 (yellow) or a negative, nonreactive Alexa Fluor® 488-conjugated control antibody (red). 1% BSA in PBS was used as the blocking reagent for all blocking and antibody incubation steps.

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