Datasheet: TZA022

BATCH NUMBER 162597

Description:	ANTI PARP1-S499-ADP-RIBOSE
Specificity:	PARP1-S499-ADP-RIBOSE
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	AbD34251ad
Isotype:	Fab antibody
Quantity:	0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
ELISA	▪			
Western Blotting	▪			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species

Protein/peptide tag

Product Form

A monovalent human recombinant Fab selected from the HuCAL® phage display library, Expressed in a proprietary *E. coli.* strain. The antibody is tagged with a DYKDDDDK tag, a SpyTag version 2 (VPTIVMVDAYKRYK) and a His6-tag (HHHHHH) at the C-terminus of the antibody heavy chain. This antibody is supplied as a liquid.

Preparation

Recombinant Fab antibody expressed in *E. coli* and purified by affinity chromatography

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.0095% MIT

Carrier Free

Yes

Approx. Protein Concentrations	Total protein concentration 0.5 mg/ml
Immunogen	APRGKS(ADPr)GAALSKKSKGQVGGK
Specificity	**Anti-PARP1-S499-ADP-ribose antibody, clone AbD34251ad,** recognizes PARP1, ADP-ribosylated at Serine 499. Poly(ADP-ribose) polymerase 1 (PARP1) is an early responder to DNA damage in human cells. Upon binding to genomic lesions PARP1 is able to transfer a mono- or poly-ADP-ribose residue from nicotinamide adenine dinucleotide (NAD+) to their substrate proteins, for chromatin decompaction and repair factor recruitment (Bütepage *et al.* 2015, Suskiewicz *et al.* 2020). During the DNA damage response, serine is the primary target for PARP1 ADP-ribosylation which uses Histone PARylation factor 1 (HPF1) as an accessory factor to switch the amino-acid specificity of PARP1 from aspartate/glutamate to serine residues (Bonfiglio *et al.* 2017, Suskiewicz *et al.* 2020). PARP1/HPF1 during DNA damage response, primarily target PARP1 itself and histone H3, ribosylating these substrate proteins. This anti-PARP1-S499-ADP-ribose antibody, clone AbD34251ad was generated using an ADP-ribosylated PARP1S499 antigen. It is tagged with a SpyTag2 at the C-terminus of the Fab heavy chain, enabling the user to couple it to a SpyCatcher reagent for conversion to alternative formats in less than an hour. It has the same specificity than the human/rabbit IgG chimera antibody HCA356, clone AbD34251 that does not bind any of the other Ser-ADP-ribosylated peptides tested, nor does it bind poly-ADP-ribose in a site-specific manner (Bonfiglio *et al.* 2020).
Storage	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C. Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.
Guarantee	12 months from date of despatch
Acknowledgements	This product and/or its use is covered by claims of U.S. patents, and/or pending U.S. and non-U.S. patent applications owned by or under license to Bio-Rad Laboratories, Inc. See bio-rad.com/en-us/trademarks for details. His-tag is a registered trademark of EMD Biosciences
Health And Safety Information	Material Safety Datasheet documentation #20479 available at: https://www.bio-rad-antibodies.com/SDS/TZA022 20479
Regulatory	For research purposes only

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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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