Datasheet: TZA0117

Description:	ANTI POLY-ADP-RIBOSE
Specificity:	POLY-ADP-RIBOSE
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	AbD64138
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	▪			
Immunofluorescence	▪			

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

Human

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

Source

E. coli.

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.0095% MIT

Carrier Free

Yes

Approx. Protein Concentrations	Total protein concentration 0.5 mg/ml
Immunogen	ARTKQTARKS(polyADPr)TGGKAC
Specificity	**Anti poly-ADP-ribose antibody, clone AbD64138,** recognizes poly-adenosine diphosphate (ADP)-ribosylation. ADP-ribosylation is a reversible post-translational modification that occurs in multicellular organisms as well as some lower unicellular eukaryotes, but is absent in prokaryotes and yeast (Bürkle 2005). ADP ribosylation has been shown to play critical roles in many physiological and pathological processes, including bacterial pathogenesis and signaling and metabolism to control chromatin-related processes including transcription and DNA repair (Bonfiglio *et al.* 2020, Bütepage *et al.* 2015). Members of the ADP-ribosyltransferase (ART) superfamily of proteins, including the poly(ADP-ribose) polymerases (PARPs) subfamily, catalyze the transfer of ADP-ribose from nicotinamide adenine dinucleotide (NAD+) onto substrate protein via N-, O-, or S-glycosidic linkages. These transferases are able to transfer a single ADP-ribose residue to their substrate proteins, in a process known as mono-ADP-ribosylation. They are also able to attach additional ADP-ribose residues to create either linear or branched chains of ADP-ribose, known as poly-ADP-ribosylation (Poly-ADPr) (Bütepage *et al.* 2015). This anti poly-ADP-ribose antibody, clone AbD64138, specifically and sensitively recognizes poly-ADPr but not mono-ADPr. Clone AbD64138 is tagged with a SpyTag at the C-terminus of the Fab heavy chain, enabling the user to couple the purified format to a SpyCatcher reagent for conversion to alternative formats in less than an hour.
References	1. Dauben, H. *et al.* (2026) Versatile and sensitive detection of mono- and poly(ADP-ribosyl)ation reveals XRCC1-dependent remodelling of PARP1 signalling. Nat Commun. 17 (1): 3216.
Further Reading	1. Dauben, H. *et al.* (2023) A chemical biology/modular antibody platform for ADP-ribosylation signaling. Trends Biochem Sci. 48 (10): 910-911. 2. Bonfiglio, J.J & Matic, I. (2020) Site-Specific Serine Adp-Ribosylated Proteins And Peptides And Method For Producing The Same World Intellectual Property Organization International Publication no. WO2020058277A1
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. Should this product contain a precipitate we recommend microcentrifugation before use.
Guarantee	12 months from date of despatch

Acknowledgements	Bio-Rad has obtained the right for the manufacture and commercialization of the antibodies from Max-Planck-Innovation GmbH, the technology transfer office of the Max Planck Institute for Biology of Ageing. Further information on the Serine ADP-ribosylation technology used to generate and characterize the antibodies can be found here: Dauber *et al.* 2023 and Bonfiglio *et al.* 2020. 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/TZA0117
Regulatory	For research purposes only

Product inquiries: www.bio-rad-antibodies.com/technical-support

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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