

Datasheet: TZA020P

Description:	ANTI MONO-ADP-RIBOSE:HRP
Specificity:	MONO-ADP-RIBOSE
Format:	HRP
Product Type:	Monoclonal Antibody
Clone:	AbD43647
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	Human
Product Form	A bivalent human recombinant Fab (lambda light chain) generated by coupling of the monovalent SpyTagged Fab TZA020 with a HRP conjugated BiSpyCatcher version 2 (TZC002P). The coupled antibody has two DYKDDDDK tags and three His6-tags. It contains SpyTag3 peptide (BLP086) in 5-fold molar excess to block any unreacted Catcher sites. This antibody is supplied as a liquid.
Preparation	Recombinant Fab antibody expressed in <i>E. coli</i> 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(adpr)TGGKAPRKQLAGGK
Specificity	Anti mono-ADP-ribose antibody, clone AbD43647, recognizes mono-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 (Bütepage et al. 2015). The anti mono-ADP-ribose antibody, clone AbD43647 is a mono-selective ADP-ribose antibody with a preference for mono-Ser-ADPr catalysed by the poly(ADP-ribose) polymerase 1 PARP1. Clone AbD43647 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. Anti mono-ADP-ribose antibody, clone AbD43647 is a mono-selective ADP-ribose antibody generated using an H3S10ADPr peptide as the antigen. This clone is specific for mono-ADPr and has a preference for Ser-mono-ADPr.
References	- Longarini, E.J. <i>et al.</i> (2023) Modular antibodies reveal DNA damage-induced mono-ADP-ribosylation as a second wave of PARP1 signaling. Mol Cell. 83 (10): 1743-60.e11. - Dauben, H. & Matić, I. (2025) Versatile Modular Antibodies for Sensitive and Specific Detection of Poly-ADP-Ribose bioRxiv 10 Feb [Preprint]. - Dauben, H. <i>et al.</i> (2026) Versatile and sensitive detection of mono- and poly(ADP-ribosyl)ation reveals XRCC1-dependent remodelling of PARP1 signalling. Nat Commun. 17 (1): 3216 - de Mattos, P.D. <i>et al.</i> (2026) Novel ADPRS Missense Variant (p.Leu162Pro) Causes Stress-Induced Childhood-Onset Neurodegeneration With Ataxia and Seizures. Neurol Genet. 12 (3): e200375.
Storage	This product is shipped frozen. When ready to use, thaw and aliquot the sample as needed. Store aliquots at -70°C, if available, otherwise store at -20°C. It is not recommended to keep aliquots at 4°C for more than one week.

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/TZA020P
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](https://www.bio-rad-antibodies.com/datasheets)
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