

## Datasheet: TZA0118

<b>Description:</b>	ANTI MONO-ADP-RIBOSE
<b>Specificity:</b>	MONO-ADP-RIBOSE
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	AbD41122
<b>Isotype:</b>	Fab antibody
<b>Quantity:</b>	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](http://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.

<b>Target Species</b>	Human
<b>Product Form</b>	A monovalent human recombinant Fab selected from the HuCAL® phage display library, expressed in a proprietary <i>E. coli</i> 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.
<b>Preparation</b>	Recombinant Fab antibody expressed in <i>E. coli</i> and purified by affinity chromatography
<b>Source</b>	<i>E. coli</i> .
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.0095% MIT
<b>Carrier Free</b>	Yes

<b>Approx. Protein Concentrations</b>	Total protein concentration 0.5 mg/ml
<b>Immunogen</b>	KITPLKTS(ADPr)FKKKDQKRLGTGTLRGGK-(biotin)
<b>Specificity</b>	<p><b>Anti mono-ADP-ribose antibody, clone AbD41122</b>, 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 (<a href="#">Bürkle 2005</a>). 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 (<a href="#">Bonfiglio et al. 2020</a>, <a href="#">Bütepage et al. 2015</a>).</p> <p>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<sup>+</sup>) 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 (<a href="#">Bütepage et al. 2015</a>).</p> <p>This anti mono-ADP-ribose antibody, clone AbD41122, is a high affinity mono-ADP-ribose antibody that has been affinity matured from the AbD33205 parental clone (<a href="#">TZA021</a>). Compared to clone AbD43647 (<a href="#">TZA020</a>), AbD41122 has a preference for protein mono-ADP-ribosylation, does not recognise free ADP-ribose and strongly recognizes histone H1 mono-ADP-ribosylation. Clone AbD41122 is tagged with a SpyTag at the C-terminus of the Fab heavy chain, enabling the user to couple to a <a href="#">SpyCatcher reagent</a> for conversion to alternative formats in less than an hour.</p>
<b>References</b>	<ol style="list-style-type: none"> <li>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. <a href="#">Nat Commun. 17 (1): 3216.</a></li> </ol>
<b>Further Reading</b>	<ol style="list-style-type: none"> <li>Dauben, H. <i>et al.</i> (2023) A chemical biology/modular antibody platform for ADP-ribosylation signaling. <a href="#">Trends Biochem Sci. 48 (10): 910-911.</a></li> <li>Bonfiglio, J.J &amp; Matic, I. (2020) Site-Specific Serine Adp-Ribosylated Proteins And Peptides And Method For Producing The Same <a href="#">World Intellectual Property Organization International Publication no. WO2020058277A1</a></li> </ol>
<b>Storage</b>	<p>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.</p> <p>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.</p>

**Guarantee** 12 months from date of despatch

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**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](#).  
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**Health And Safety Information** Material Safety Datasheet documentation #20479 available at: <https://www.bio-rad-antibodies.com/SDS/TZA0118>

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**Regulatory** For research purposes only

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**Product inquiries:** [www.bio-rad-antibodies.com/technical-support](http://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](http://bio-rad-antibodies.com/datasheets)  
'M450055:260303'

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