

Datasheet: TZA023

**BATCH NUMBER 162598**

<b>Description:</b>	ANTI H3-S10-ADP-RIBOSE
<b>Specificity:</b>	H3-S10-ADP-RIBOSE
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	AbD33644ad
<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	▪			

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 and 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

<b>Approx. Protein Concentrations</b>	Total protein concentration 0.5 mg/ml
<b>Immunogen</b>	ARTKQTARKS(ADPr)TGGKAC
<b>Specificity</b>	<p><b>Anti-H3-S10-ADP-ribose antibody, clone AbD33644ad</b>, recognizes Histone H3, ADP-ribosylated at Serine 10. This antibody also recognizes the less abundant H3 site H3-S28-ADP-ribose, however this is with a lower affinity and is due to the similarities between sequences flanking the two H3 target sites. This clone does not detect poly-ADP-ribose in a site-specific manner (<a href="#">Bonfiglio et al. 2020</a>).</p> <p>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<sup>+</sup>) to their substrate proteins, for chromatin decompaction and repair factor recruitment (<a href="#">Bütepage et al. 2015</a>, <a href="#">Suskiewicz et al. 2020</a>).</p> <p>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 (<a href="#">Bonfiglio et al. 2017</a>, <a href="#">Suskiewicz et al. 2020</a>). During the DNA damage response PARP1 and HPF1 primarily target PARP1 itself and histone H3, ribosylating these targets.</p> <p>This anti-H3-S10-ADP-ribose antibody, clone AbD33644ad is tagged with a SpyTag2 at the C-terminus of the Fab heavy chain, enabling the user to couple it to a <a href="#">SpyCatcher reagent</a> for conversion to alternative formats in less than an hour. It has the same specificity than the bivalent human recombinant Fab antibody <a href="#">HCA357</a>, clone AbD33644.</p>
<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>
<b>Guarantee</b>	12 months from date of despatch
<b>Acknowledgements</b>	<p>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 <a href="http://bio-rad.com/en-us/trademarks">bio-rad.com/en-us/trademarks</a> for details.</p> <p>His-tag is a registered trademark of EMD Biosciences.</p>
<b>Health And Safety Information</b>	<p>Material Safety Datasheet documentation #20479 available at: <a href="https://www.bio-rad-antibodies.com/SDS/TZA023">https://www.bio-rad-antibodies.com/SDS/TZA023</a> 20479</p>
<b>Regulatory</b>	For research purposes only

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