

## Datasheet: HCA357

**BATCH NUMBER 158441**

<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>	AbD33644
<b>Isotype:</b>	HuCAL Fab bivalent
<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	▪			2 ug/ml

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 bivalent human recombinant Fab (lambda light chain) selected from the HuCAL phage display library. Expressed in *E. coli*. This Fab fragment is bivalent by dimerization of the bacterial alkaline phosphatase fusion protein. The antibody is tagged with a DYKDDDDK tag and a HIS-tag (HHHHHH) at the C-terminus of the antibody heavy chain. This antibody is supplied as liquid.

### Preparation

Metal chelate affinity chromatography

### Buffer Solution

Phosphate buffered saline

### Preservative Stabilisers

0.01% Thiomersal

### 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 AbD33644</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 clone has been used in Western blotting, in the context of the DNA damage response with Histone H3 Ser-ADPr sites recognized by this antibody in lysates from Wild Type and ARH3 KO cells treated with H<sub>2</sub>O<sub>2</sub> (<a href="#">Bonfiglio et al. 2020</a>).</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>Sold under license of U.S. Patents 6753136, 7785859 and 8273688 and corresponding patents. This antibody was developed by Bio-Rad, Zeppelinstr. 4, 82178 Puchheim, Germany.</p> <p>His-tag is a registered trademark of EMD Biosciences.</p>
<b>Health And Safety Information</b>	<p>Material Safety Datasheet documentation #10094 available at: <a href="https://www.bio-rad-antibodies.com/SDS/HCA357">https://www.bio-rad-antibodies.com/SDS/HCA357</a> 10094</p>
<b>Regulatory</b>	For research purposes only

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