

Datasheet: HCA357

Description:	ANTI H3-S10-ADP-RIBOSE
Specificity:	H3-S10-ADP-RIBOSE
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	AbD33644
Isotype:	HuCAL Fab bivalent
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	▪			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.

Approx. Protein

Total protein concentration 0.5 mg/ml.

Concentrations

Immunogen ARTKQTARKS(ADPr)TGGKAC

Specificity **Anti-H3-S10-ADP-ribose antibody, clone AbD33644**, 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 ([Bonfiglio et al. 2020](#)).

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⁺) to their substrate proteins, for chromatin decompaction and repair factor recruitment ([Bütepage et al. 2015](#), [Suskiewicz et al. 2020](#)).

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 ([Bonfiglio et al. 2017](#), [Suskiewicz et al. 2020](#)). During the DNA damage response PARP1 and HPF1 primarily target PARP1 itself and histone H3, ribosylating these targets.

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 H₂O₂ ([Bonfiglio et al. 2020](#)).

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 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.
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Health And Safety Information Material Safety Datasheet documentation #10094 available at:
10094: <https://www.bio-rad-antibodies.com/uploads/MSDS/10094.pdf>

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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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