

PRODUCT INFORMATION



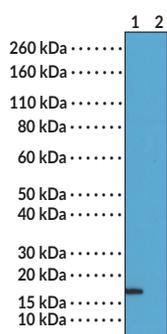
Histone H2BS14Ph Monoclonal Antibody (Clone RM238)

Item No. 32175

Overview and Properties

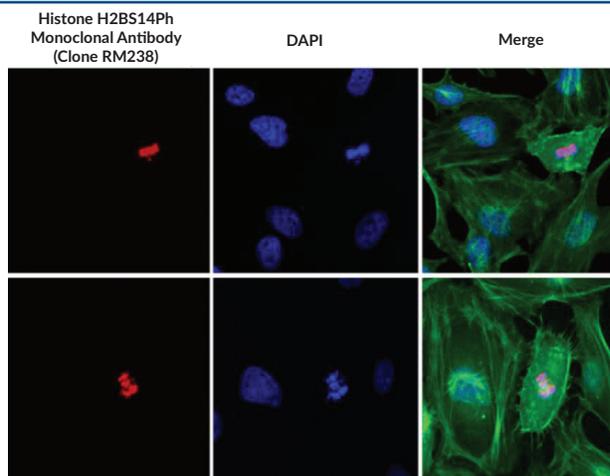
Contents:	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonyms:	H2B (Phospho-Ser14), H2BpS14, H2BpSer14, Phospho-Histone H2B Serine 14, Phosphorylated Histone H2B Serine 14
Immunogen:	Peptide corresponding to H2BS14Ph
Cross Reactivity:	(+) H2BS14Ph; (-) Other phosphorylated histones
Species Reactivity:	(+) Vertebrates
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
Concentration:	1.0 mg/ml
Clone:	RM238
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA, Immunocytochemistry (ICC), Multiplex-based assays, and Western blot (WB); the recommended starting concentration for ELISA is 0.2-1 µg/ml, 1-2 µg/ml for ICC, 0.1-1 µg/ml for multiplex-based assays, and 0.5-2 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: Acid extracts from HeLa cells (treated)
Lane 2: Acid extracts from HeLa cells (untreated)

WB of acid extracts from HeLa cells treated or untreated with nocodazole using Histone H2BS14Ph Monoclonal Antibody (Clone RM238) at 0.5 µg/ml. This showed a band of H2BS14Ph in treated HeLa cells.



Immunocytochemistry of HeLa cells using Histone H2BS14Ph Monoclonal Antibody (Clone RM238) (red) and DAPI (blue). Actin filaments have been labeled with fluorescein phalloidin (green).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Histone H2B is a nuclear protein and a component of the nucleosome core, a basic unit of chromatin, that is essential for organizing genomic DNA in eukaryotic nuclei.¹ It is a globular protein that contains a histone fold domain with a C-terminal α -helix that facilitates nucleosome interactions and chromatin compaction, as well as an unstructured N-terminal tail that extends outside of the nucleosome core, both of which are subject to various post-translational modifications (PTMs), including ubiquitination, acetylation, methylation, and phosphorylation.¹⁻³ Phosphorylation of histone H2B at serine 14 (H2BS14Ph) is associated with DNA damage and induces apoptotic chromatin condensation.^{4,5} H2BS14Ph also correlates with class switch recombination and somatic hypermutation in germinal center B cells.⁶ Cayman's H2BS14Ph Monoclonal Antibody (Clone RM238) can be used for ELISA, immunocytochemistry (ICC), multiplex-based assay, and Western blot (WB) applications.

References

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2. Wyrick, J.J. and Parra, M.A. The role of histone H2A and H2B post-translational modifications in transcription: A genomic perspective. *Biochim. Biophys. Acta* **1789(1)**, 37-44 (2009).
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4. Wang, C., Pi, E., Zhan, Q., *et al.* Involvement of histone PTMs in DNA repair processes in relation to age-associated neurodegenerative disease. *DNA Repair and Human Health*. Vengrova, S., editor, *IntechOpen* (2011).
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6. Odegard, V.H., Kim, S.T., Anderson, S.M., *et al.* Histone modifications associated with somatic hypermutation. *Immunity* **23(1)**, 101-110 (2005).

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