

PRODUCT INFORMATION



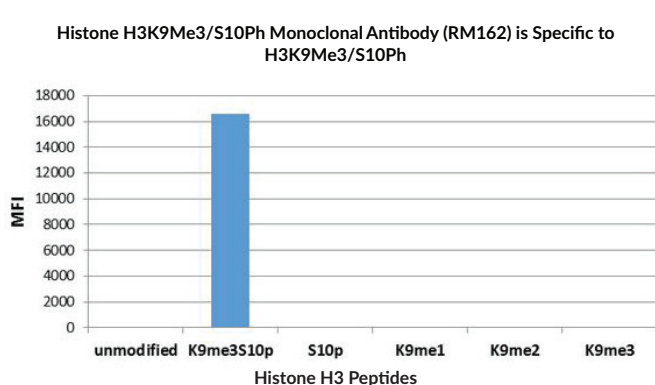
Histone H3K9Me3/S10Ph Monoclonal Antibody (RM162)

Item No. 32168

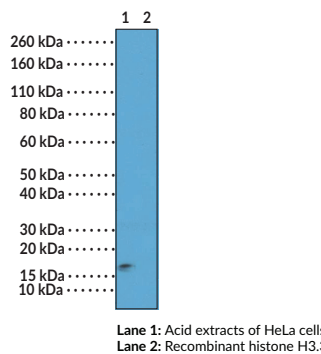
Overview and Properties

Contents:	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Immunogen:	Peptide corresponding to H3K9Me3/S10Ph
Cross Reactivity:	(+) H3K9Me3/S10Ph; (-) Unmodified histone H3, H3K9Me1, H3K9Me2, H3K9Me3, H3S10Ph
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:	RM162
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA, Multiplex-based assays, and Western blot (WB); the recommended starting concentration is 0.01-0.5 µg/ml for ELISA, 0.1-1 µg/ml for multiplex-based assays, and 0.01-1 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Histone H3K9Me3/S10Ph Monoclonal Antibody (RM162) specifically reacts to histone H3 only when modified by both trimethylation at lysine 9 and phosphorylation at serine 10 (K9Me3/S10Ph). No cross reactivity with histone H3, H3K9Me1, H3K9Me2, H3K9Me3, or H3S10Ph.



WB of acid extracts of HeLa cells and recombinant histone H3.3. Acid extracts of HeLa cells and recombinant histone H3.3 protein were subjected to WB using 0.01 µg/ml of Histone H3K9Me3/S10Ph Monoclonal Antibody (RM162), which showed bands for H3K9Me3/S10Ph.

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 H3 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 an unstructured N-terminal tail that extends outside of the nucleosome core and is subject to various post-translational modifications (PTMs), including methylation, phosphorylation, acetylation, and citrullination.^{1,2} Trimethylation of lysine 9 and phosphorylation of serine 10 on histone H3 (H3K9Me3/S10Ph) is associated with repression of polycomb-regulated genes in differentiated mesenchymal stem cells (MSCs) and resting B cells but not pluripotent embryonic stem cells (ESCs).³ Cayman's H3K9Me3/S10Ph Monoclonal Antibody (RM162) recognizes histone H3 only when modified by both trimethylation at K9 and phosphorylation at S10. This antibody can be used for ELISA, multiplex-based assay, and Western blot (WB) applications.

References

1. Hyun, K., Jeon, J., Park, K., *et al.* Writing, erasing and reading histone lysine methylations. *Exp. Mol. Med.* **49(4)**, e324 (2017).
2. Sharda, A., Amnekar, R.V., Natu, A., *et al.* Histone posttranslational modifications: Potential role in diagnosis, prognosis, and therapeutics of cancer. *Prognostic Epigenetics*. Sharma, S., editor, *Academic Press* (2019).
3. Sabbattini, P., Sjoberg, M., Nikic, S., *et al.* An H3K9/S10 methyl-phospho switch modulates Polycomb and Pol II binding at repressed genes during differentiation. *Mol. Biol. Cell* **25(6)**, 904-915 (2014).

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