

# PRODUCT INFORMATION

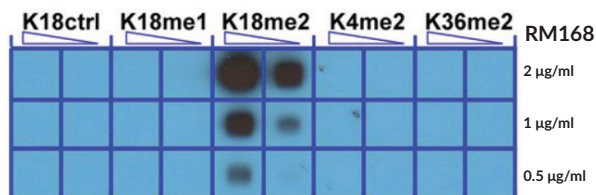
## Histone H3K18Me2 Monoclonal Antibody (RM168)

Item No. 32148

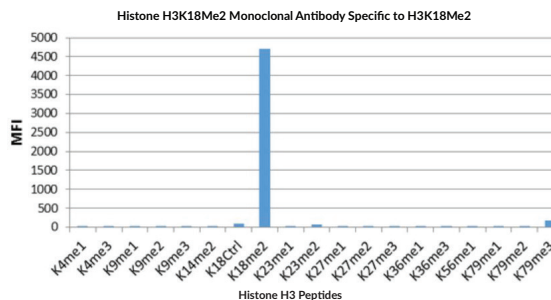
### Overview and Properties

<b>Contents:</b>	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
<b>Synonym:</b>	Dimethylated Histone H3 Lysine 18
<b>Immunogen:</b>	Peptide corresponding to H3K18Me2
<b>Cross Reactivity:</b>	(+) H3K18Me2; (-) Unmodified H3K18, H3K4Me1, H3K4Me3, H3K9Me1, H3K9Me2, H3K9Me3, H3K14Me2, H3K23Me1, H3K23Me2, H3K27Me1, H3K27Me2, H3K27Me3, H3K36Me1, H3K36Me3, H3K56Me1, H3K79Me1, H3K79Me2, H3K79Me3
<b>Species Reactivity:</b>	(+) Vertebrates
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
<b>Concentration:</b>	1.0 mg/ml
<b>Clone:</b>	RM168
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Applications:</b>	ELISA, Multiplex-based assays, and Western blot (WB); the recommended starting concentration for ELISA and multiplex-based assays is 0.1-0.5 µg/ml and 0.2-1 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

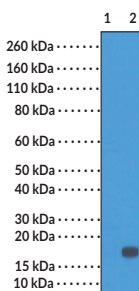
### Images



A peptide dot blot shows Histone H3K18Me2 Monoclonal Antibody (RM168) reacts only to H3K18Me2. No cross reactivity with unmodified H3K18, H3K18Me1, H3K4Me2, or H3K36Me2.



Histone H3K18Me2 Monoclonal Antibody (RM168) specifically reacts to H3K18Me2. No cross reactivity with other methylated lysines in histone H3.



Lane 1: Recombinant histone H3.3  
Lane 2: Acid extracts of HeLa cells

WB of recombinant histone H3.3 and acid extracts of HeLa cells using 0.5 µg/ml of Histone H3K18Me2 Monoclonal Antibody (RM168).

**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

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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.<sup>1</sup> 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.<sup>1,2</sup> Histone H3 lysine 18 (H3K18) is subject to both acetylation and methylation.<sup>3</sup> An H3K18Me2 (1-21) peptide reduces the association of lamin A/C with chromatin in a chromatin immunoprecipitation (ChIP) assay.<sup>4</sup> Dimethylation of histone H3 at lysine 18 is increased in patients with diabetes.<sup>5</sup> Cayman's Histone H3K18Me2 Monoclonal Antibody (RM168) can be used for ELISA, multiplex-based assay, and Western blot (WB) applications.

## References

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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. Garcia, B.A., Busby, S.A., Shabanowitz, J., *et al.* Resetting the epigenetic histone code in the MRL-lpr/lpr mouse model of lupus by histone deacetylase inhibition. *J. Proteome Res.* **4(6)**, 2032-2042 (2005).
4. Vazquez, B.N., Thackray, J.K., Simonet, N.G., *et al.* SIRT7 mediates L1 elements transcriptional repression and their association with the nuclear lamina. *Nucleic Acids Res.* **47(15)**, 7870-7885 (2019).
5. Wang, W., Sidoli, S., Zhang, W., *et al.* Abnormal levels of histone methylation in the retinas of diabetic rats are reversed by minocycline treatment. *Sci. Rep.* **7**, 45103 (2017).

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