

PRODUCT INFORMATION



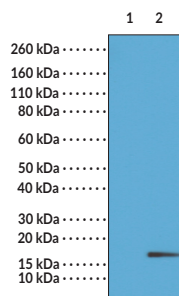
Histone H3K18Me1 Monoclonal Antibody (RM167)

Item No. 32149

Overview and Properties

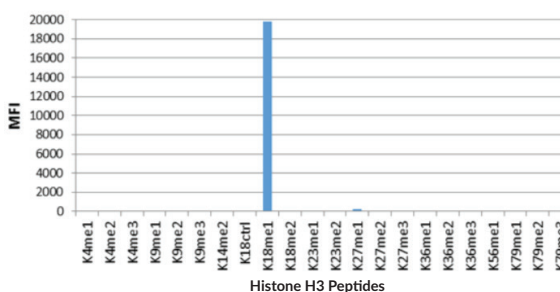
Contents: This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonym: Monomethylated Histone H3 Lysine 18
Immunogen: Peptide corresponding to H3K18Me1
Cross Reactivity: (+) H3K18Me1; (-) Unmodified H3K18, H3K18Me2, H3K4Me1, H3K4Me2, H3K4Me3, H3K9Me1, H3K9Me2, H3K9Me3, H3K14Me2, H3K23Me1, H3K23Me2, H3K27Me1, H3K27Me2, H3K27Me3, H3K36Me1, H3K36Me2, H3K36Me3, H3K56Me1, H3K79Me1, H3K79Me2, H3K79Me3
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 mg/ml
Clone: RM167
Host: Rabbit
Isotype: IgG
Applications: ELISA, multiplex-based assays, and Western blot (WB); the recommended starting concentration for ELISA is 0.2-1 µg/ml, 0.1-0.5 µg/ml for multiplex-based assays, and 1-2 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



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 1 µg/ml of Histone H3K18Me1 Monoclonal Antibody (RM167). This showed a band of H3K18Me1 in HeLa cells.



Histone H3K18Me1 Monoclonal Antibody (RM167) Specifically Reacts to Histone H3 Monomethylated at Lysine 18 (H3K18Me1). No cross reactivity with unmodified H3K18, H3K18Me2, or other methylations in histone H3.

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} Monomethylation of histone H3 at lysine 18 (H3K18Me1) has a slower turnover rate than all other histone H3 monomethylation sites with gene-activating function.^{3,4} Cayman's Histone H3K18Me1 Monoclonal Antibody (RM167) can be used for ELISA, multiplex-based assays, 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. Zee, B.M., Levin, R.S., Xu, B., *et al.* *In vivo* residue-specific histone methylation dynamics. *J. Biol. Chem.* **285(5)**, 3341-3350 (2010).
4. Xu, Y.-M., Du, J.-Y., and Lau, A.T.Y. Posttranslational modifications of human histone H3: An update. *Proteomics* **14(17-18)**, 2047-2060 (2014).

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