

PRODUCT INFORMATION



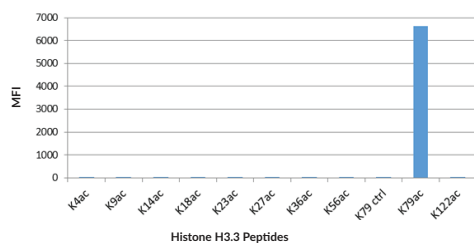
Histone H3K79Ac Monoclonal Antibody (RM156)

Item No. 32136

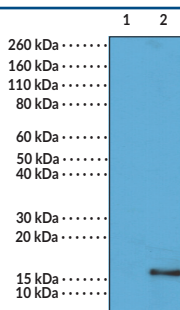
Overview and Properties

Contents: This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonym: Acetylated Histone H3 Lysine 79
Immunogen: Peptide corresponding to H3K79Ac
Cross Reactivity: (+) H3K79Ac; (-) Unmodified H3K79, H3K4Ac, H3K9Ac, H3K14Ac, H3K18Ac, H3K23Ac, H3K27Ac, H3K36Ac, H3K56Ac, H3K122Ac
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: RM156
Host: Rabbit
Isotype: IgG
Applications: Chromatin IP (ChIP), ELISA, immunocytochemistry (ICC), multiplex-based assays, and Western blot (WB); the recommended starting concentration is 2-10 µg/ml for ChIP, 0.2-1 µg/ml for ELISA, 0.05-0.2 µg/ml for multiplex-based assays, and 0.5-2 µg/ml for WB and ICC. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images

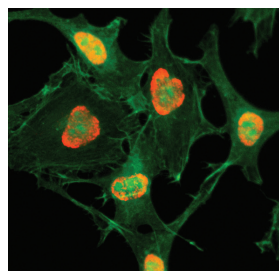


Histone H3K79Ac Monoclonal Antibody (RM156) specifically reacts to Histone H3 acetylated at lysine 79 (H3K79Ac). No cross reactivity with H3K4Ac, H3K9Ac, H3K14Ac, H3K18Ac, H3K23Ac, H3K27Ac, H3K36Ac, H3K56Ac, or H3K122Ac.



Lane 1: HeLa cells (untreated)
Lane 2: HeLa cells (treated)

WB of acid extracts from HeLa cells untreated or treated with sodium butyrate, using Histone H3K79Ac Monoclonal Antibody (RM156) at 1.0 µg/ml, showed a band of H3K79Ac in treated HeLa cells.



Immunocytochemistry of HeLa cells treated with sodium butyrate, using Histone H3K79Ac Monoclonal Antibody (RM156) (red). 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.

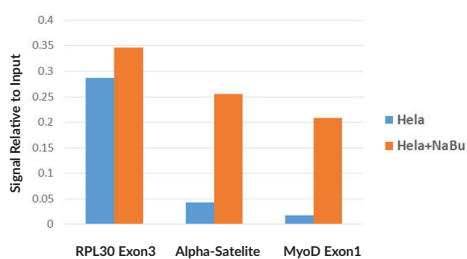
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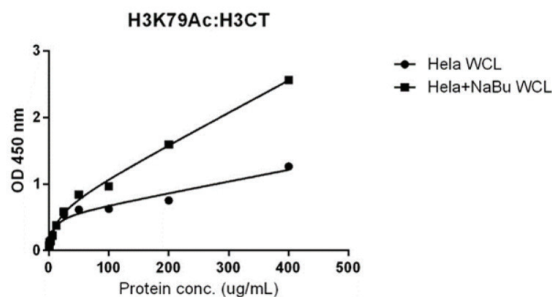
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ChIP of Histone H3K79Ac Monoclonal Antibody (RM156). ChIP performed on HeLa cells with or without sodium butyrate (NaBu) treatment, using Histone H3K79Ac Monoclonal Antibody (RM156) at 5 μ g. Real-time PCR was performed using primers specific to the gene indicated.



Detection of HeLa whole cell lysate (WCL), treated or untreated with sodium butyrate (NaBu). Sandwich ELISA using Histone H3K79Ac Monoclonal Antibody (RM156) as the capture antibody (5 μ g/ml) and Anti-Histone H3 pan Rabbit Monoclonal Antibody as the detection antibody (1 μ g/ml).

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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} Acetylation of histone H3 at lysine 79 (H3K79Ac) has been detected in humans and yeast and is associated with inactive chromatin.³⁻⁵ Cayman's Histone H3K79Ac Monoclonal Antibody (RM156) can be used for chromatin immunoprecipitation (ChIP), ELISA, immunocytochemistry (ICC), 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. Garcia, B.A., Hake, S.B., Diaz, R.L., *et al.* Organismal differences in post-translational modifications in histones H3 and H4. *J. Biol. Chem.* **282(10)**, 7641-7655 (2007).
4. Bheda, P., Swatkoski, S., Fiedler, K.L., *et al.* Biotinylation of lysine method identifies acetylated histone H3 lysine 79 in *Saccharomyces cerevisiae* as a substrate for Sir2. *Proc. Natl. Acad. Sci. USA* **109(16)**, E916-E925 (2012).
5. Gatta, R. and Mantovani, R. Single nucleosome ChIPs identify an extensive switch of acetyl marks on cell cycle promoters. *Cell Cycle* **9(11)**, 2149-2159 (2010).

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