PRODUCT INFORMATION

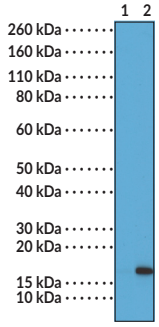
Histone H3K36Ac Monoclonal Antibody (RM154)

Item No. 32135

Overview and Properties

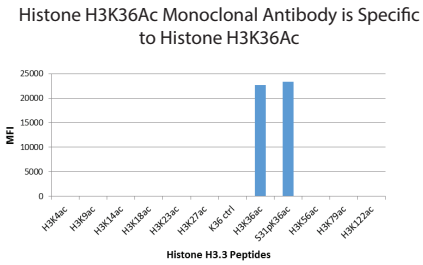
Contents:	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonyms:	Acetylated Histone H3 Lysine 36
Immunogen:	Peptide corresponding to H3K36Ac
Cross Reactivity:	(+) H3K36Ac, H3K36Ac/S31Ph; (-) Unmodified H3K36, H3K4Ac, K3K9Ac, K3K14Ac, H3K18Ac, H3K23Ac, H3K27Ac, H3K56Ac, H3K79Ac, 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:	RM154
Host:	Rabbit
Isotype:	IgG
Applications:	Chromatin immunoprecipitation (ChIP), ELISA, immunocytochemistry (ICC), multiplex-based assays, and Western blot (WB); the recommended starting concentration is 1-5 µg, 0.2-1 and 0.1-0.5 µg/ml for ChIP, ELISA, and multiplex-based assay, respectively, and 0.5-2 µg/ml for ICC and WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images

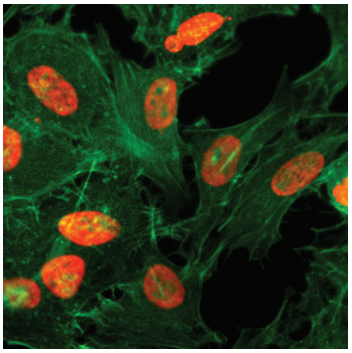


Lane 1: HeLa cells untreated
Lane 2: HeLa cells treated with sodium butyrate

WB of of acid extracts from HeLa cells untreated or treated with sodium butyrate, using Histone H3K36Ac Monoclonal Antibody (RM154) at 1.0 µg/ml, showed a band of H3K36Ac in treated HeLa.



Histone H3K36Ac Monoclonal Antibody (RM 154) specifically reacts to histone H3 acetylated at lysine 36 (K36ac), and is not affected by the phosphorylation of neighboring Ser[31]. No cross reactivity with H3K4Ac, K3K9Ac, H3K14Ac, H3K18Ac, H3K23Ac, H3K27Ac, H3K56Ac, H3K79Ac, or H3K122Ac.



Immunocytochemistry of HeLa cells treated with sodium butyrate, using Histone H3K36Ac Monoclonal Antibody (RM154) (red). Actin filaments have been labeled with fluorescein phalloidin (green).

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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 36 (H3K36Ac) is predominantly localized to the promoters of genes transcribed by RNA polymerase II and is highly conserved in mammals.[3] Cayman's Histone H3K36Ac Monoclonal Antibody (RM154) 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. Morris, S.A., Rao, B., Garcia, B.A., *et al.* Identification of histone H3 lysine 36 acetylation as a highly conserved histone modification. *J. Biol. Chem.* **282(10)**, 7632-7640 (2007).

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