

# PRODUCT INFORMATION



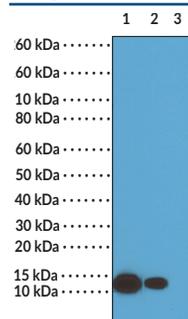
## Histone H4K8Ac Monoclonal Antibody (RM201)

Item No. 32157

### Overview and Properties

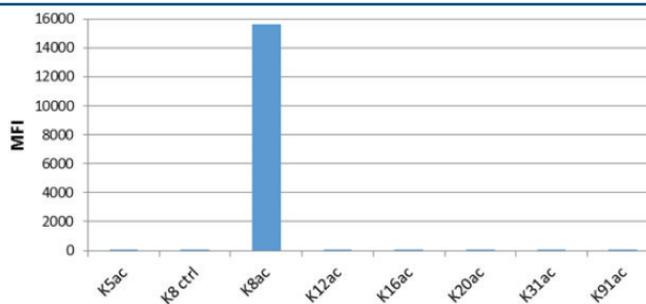
<b>Contents:</b>	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
<b>Synonym:</b>	Acetylated Histone H4 Lysine 8
<b>Immunogen:</b>	Peptide corresponding to H4K8Ac
<b>Cross Reactivity:</b>	(+) H4K8Ac; (-) Unmodified H4K8, H4K5Ac, H4K12Ac, H4K16Ac, H4K20Ac, H4K31Ac, H4K91Ac
<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>	RM201
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Applications:</b>	Chromatin immunoprecipitation (ChIP), ELISA, immunocytochemistry (ICC), multiplex-based assays, and Western blot (WB); the recommended starting concentration is 1-5 µg for ChIP, 0.2-1 µg/ml for ELISA, 0.5-2 µg/ml for ICC and WB, and 0.05-1 µg/ml for multiplex-based assays. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images

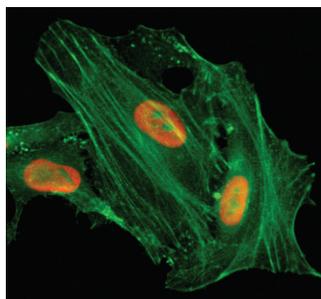


Lane 1: Acid extracts of HeLa cells treated with sodium butyrate  
Lane 2: Acid extracts of HeLa cells untreated  
Lane 3: Recombinant histone H4

WB of HeLa cells treated with sodium butyrate or left untreated and recombinant histone H4 using Histone H4K8Ac Monoclonal Antibody (RM201) at a concentration of 0.5 µg/ml.



Histone H4K8Ac Monoclonal Antibody (RM201) Reactivity to H4K8Ac. Histone H4K8Ac Monoclonal Antibody (RM201) specifically reacts to H4K8Ac. There is no cross reactivity with H4K8, H4K5Ac, H4K12Ac, H4K16Ac, H4K20Ac, H4K31Ac, or H4K91Ac.



Immunofluorescent labeling of HeLa cells treated with sodium butyrate labeled with Histone H4K8Ac Monoclonal Antibody (RM201) (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.

**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**  
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## Description

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Histone H4 is one of four core histone proteins that are involved in the organization of DNA into chromatin.<sup>1</sup> Histones are globular proteins with unstructured N-terminal tails and are subject to a variety of post-translational modifications, such as methylation, acetylation, phosphorylation, and citrullination, that can influence chromatin structure and regulate gene transcription.<sup>1,2</sup> Acetylation of histone H4 at lysine 8 (H4K8Ac) is associated with transcriptional activation and mediates recruitment of SWI/SNF chromatin remodeling complexes.<sup>3,4</sup> *P. falciparum* schizonts expressing a lysine-to-arginine substitution at Lys<sup>8</sup> in histone 4, which prevents its acetylation, have increased multiplication rates.<sup>5</sup> Tumor H4K8Ac levels are increased in patients with breast cancer.<sup>6</sup> Cayman's Histone H4K8Ac Monoclonal Antibody (RM201) can be used for chromatin immunoprecipitation (ChIP), ELISA, immunocytochemistry (ICC), multiplex-based assay, and Western blot (WB) applications.

## References

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1. Wang, Y., Li, M., Stadler, S., *et al.* Histone hypercitrullination mediates chromatin decondensation and neutrophil extracellular trap formation. *J. Cell Biol.* **184**(2), 205-213 (2009).
2. Hyun, K., Jeon, J., Park, K., *et al.* Writing, erasing and reading histone lysine methylations. *Exp. Mol. Med.* **49**(4), e324 (2017).
3. Keating, S.T., van Diepen, J.A., Risken, N.P., *et al.* Epigenetics in diabetic nephropathy, immunity and metabolism. *Diabetologia* **61**(1), 6-20 (2018).
4. Agalioti, T., Chen, G., and Thanos, D. Deciphering the transcriptional histone acetylation code for a human gene. *Cell* **111**(3), 381-392 (2002).
5. Gupta, A.P., Zhu, L., Tripathi, J., *et al.* Histone 4 lysine 8 acetylation regulates proliferation and host-pathogen interaction in *Plasmodium falciparum*. *Epigenetics Chromatin* **10**(1), 40 (2017).
6. Li, Q.-L., Wang, D.-Y., Ju, L.-G., *et al.* The hyper-activation of transcriptional enhancers in breast cancer. *Clin. Epigenetics* **11**(1), 48 (2019).

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