

# PRODUCT INFORMATION



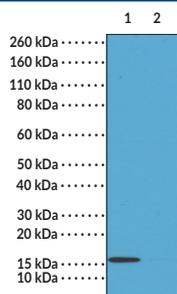
## Histone H2A.ZK4Ac Monoclonal Antibody (RM221)

Item No. 32171

### Overview and Properties

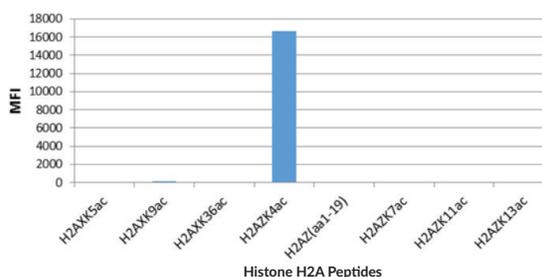
<b>Contents:</b>	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
<b>Synonym:</b>	Acetylated Histone H2A.Z Lysine 4
<b>Immunogen:</b>	Peptide corresponding to H2A.ZK4Ac
<b>Cross Reactivity:</b>	(+) H2A.ZK4Ac; (-) Unmodified H2A.Z (1-19), H2A.ZK7Ac, H2A.ZK11Ac, H2A.ZK13Ac, H2A.X5Ac, H2A.XK9Ac, H2A.XK36Ac
<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 mg/ml
<b>Clone:</b>	RM221
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Applications:</b>	ELISA, immunocytochemistry (ICC), multiplex-based assays, and Western blot (WB); the recommended starting concentration for ELISA is 0.2-1 µg/ml, 1-2 µg/ml for ICC, 0.05-0.5 µg/ml for multiplex-based assays, and 0.5-2 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images

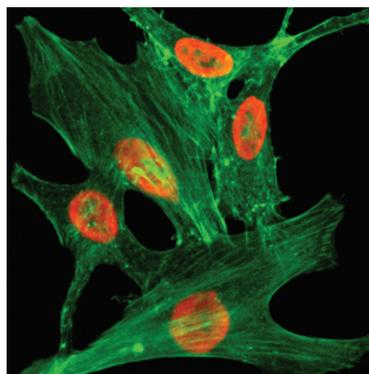


Lane 1: Acid extracts of HeLa cells (treated)  
Lane 2: Acid extracts of HeLa cells (untreated)

WB of acid extracts of HeLa cells. Acid extracts of HeLa cells, treated with sodium butyrate or left untreated, were subjected to WB using 0.5 µg/ml of Histone H2A.ZK4Ac Monoclonal Antibody (RM221), which showed a band for H2A.ZK4Ac in the treated HeLa cells.



Histone H2A.ZK4Ac Monoclonal Antibody (RM221) specifically reacts to H2A.ZK4Ac. No cross reactivity with unmodified H2A.Z (1-19) or other acetylated lysines in histone H2A.



Immunocytochemistry of HeLa cells treated with sodium butyrate using Histone H2A.ZK4Ac Monoclonal Antibody (RM221) (red). Actin filaments have been labeled with fluorescein phalloidin

**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.

Copyright Cayman Chemical Company, 02/29/2024

**CAYMAN CHEMICAL**  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM

# PRODUCT INFORMATION



## Description

---

Histone H2A.Z is a highly conserved variant of the core histone H2A that comprises approximately 5% of the total H2A found in vertebrates.<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, SUMOylation and ubiquitination.<sup>2,3</sup> Acetylation of histone H2A.Z at lysine 4 (H2A.ZK4Ac) by histone acetyltransferase 5 (KAT5) is associated with transcriptional activation.<sup>3,4</sup> Cayman's Histone H2A.ZK4Ac Monoclonal Antibody (RM221) can be used for ELISA, immunocytochemistry (ICC), multiplex-based assay, and Western blot (WB) applications.

## References

---

1. Hatch, C.L. and Bonner, W.M. The human histone H2A.Z gene. Sequence and regulation. *J. Biol. Chem.* **265**(25), 15211-15218 (1990).
2. Hyun, K., Jeon, J., Park, K., *et al.* Writing, erasing and reading histone lysine methylations. *Exp. Mol. Med.* **49**(4), e324 (2017).
3. Giaimo, B.D., Ferrante, F., Herchenröther, A., *et al.* The histone variant H2A.Z in gene regulation. *Epigenetics Chromatin* **12**, 37 (2019).
4. Colino-Sanguino, Y., Cornett, E.M., Moulder, D., *et al.* A read/write mechanism connects p300 bromodomain function to H2A.Z acetylation. *iScience* **21**, 773-788 (2019).