

# PRODUCT INFORMATION



## Histone H4 (C-Term) Rabbit Monoclonal Antibody (Clone RM212) Item No. 32186

### Overview and Properties

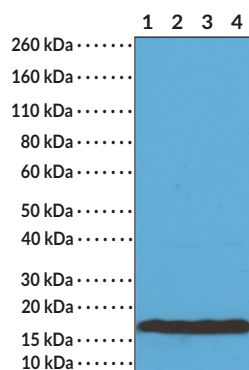
<b>Contents:</b>	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
<b>Immunogen:</b>	Peptide from the C-terminal region of human histone H4
<b>Cross Reactivity:</b>	(+) H4A independent of PTMs; (-) Other histone proteins
<b>Species Reactivity:</b>	(+) Vertebrates
<b>Form:</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>Clone:</b>	RM212
<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 is 0.2-1 µg/ml for ELISA, 1-2 µg/ml for ICC, 0.1-0.5 µg/ml for multiplex-based assays, and 0.1-0.5 µg/ml for WB.

### Images



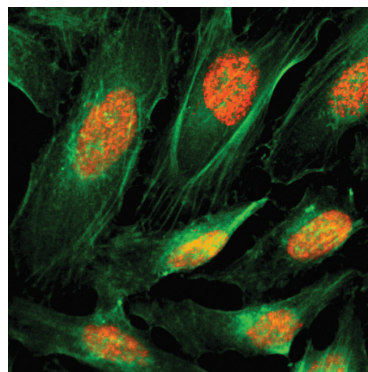
Lane 1: H2A  
Lane 2: H2B  
Lane 3: H3.1  
Lane 4: H3.3  
Lane 5: H4

WB of recombinant histone H2A, H2B, H3.1, H3.3 and H4 proteins using Histone H4 (C-Term) Rabbit Monoclonal Antibody (Clone RM212) at a concentration of 0.2 µg/ml.



Lane 1: A375  
Lane 2: HEK293  
Lane 3: HeLa  
Lane 4: SK-MEL-2

WB of A375, HEK293, HeLa and SK-MEL-2 whole cell lysates, using Histone H4 (C-Term) Rabbit Monoclonal Antibody (Clone RM212).



Immunofluorescent labeling of HeLa cells using Histone H4 (C-Term) Rabbit Monoclonal Antibody (Clone RM212) (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**  
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

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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 (PTMs), such as methylation, acetylation, phosphorylation, and citrullination, that can influence chromatin structure and regulate gene transcription.<sup>1,2</sup> Histone H4 PTMs function as epigenetic regulators of transcription by affecting chromatin structure and enhancing transcription factor binding, as well as play a key role in the maintenance of genomic integrity.<sup>3,4</sup> Levels of histone H4 are increased in the inferior and middle temporal gyrus in postmortem brains from patients with Alzheimer's disease.<sup>5</sup> Cayman's Histone H4 (C-term) Monoclonal Antibody (Clone RM212) can be used for ELISA, immunocytochemistry (ICC), multiplex-based assay, and Western blot (WB) applications. The antibody recognizes the C-terminus of histone H4 independent of PTMs.

## 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 Bio.* **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. Vettese-Dadey, M., Grant, P.A., Hebbes, T.R., *et al.* Acetylation of histone H4 plays a primary role in enhancing transcription factor binding to nucleosomal DNA *in vitro*. *EMBO J.* **15**(10), 2508-2518 (1996).
4. Jørgensen, S., Schotta, G., and Sørensen, C.S. Histone H4 Lysine 20 methylation: Key player in epigenetic regulation of genomic integrity. *Nucleic Acids Res.* **41**(5), 2797-2806 (2013).
5. Narayan, P.J., Lill, C., Faull, R., *et al.* Increased acetyl and total histone levels in post-mortem Alzheimer's disease brain. *Neurobiol. Dis.* **74**, 281-294 (2015).

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