

PRODUCT INFORMATION



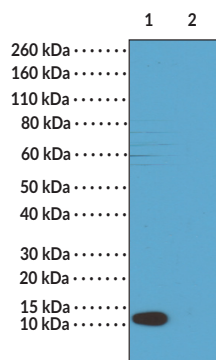
Histone H4K20Me3 Monoclonal Antibody (RM208)

Item No. 32170

Overview and Properties

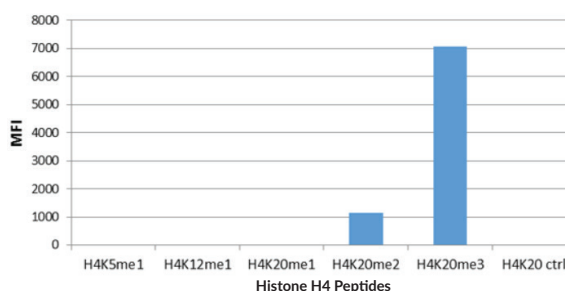
Contents: This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonym: Trimethylated Histone H4 Lysine 20
Immunogen: Peptide corresponding to H4K20Me3
Cross Reactivity: (+) H4K20Me3, H4K20Me2 (weakly); (-) Unmodified H4K20, H4K20Me1, H4K5Me1, H4K12Me1
Species Reactivity: (+) 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: RM208
Host: Rabbit
Isotype: IgG
Applications: ELISA, multiplex-based assays, and Western blot (WB); the recommended starting concentration for ELISA is 0.5-1 µg/ml, 0.1-0.5 µg/ml for multiplex-based assays, and 1-2 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: HeLa cells
Lane 2: Histone H4

WB of acid extracts of HeLa cells and recombinant histone H4 using Histone H4K20Me3 Monoclonal Antibody (RM208) at a concentration of 1 µg/ml.



Histone H4K20Me3 Monoclonal Antibody (RM208) specifically reacts to H4K20Me3 and slightly cross reacts to H4K20Me2 at higher concentrations. There is no cross reactivity with unmodified H4K20, H4K20Me1, H4K5Me1, or H4K12Me1.

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

Histone H4 is one of four core histone proteins that are involved in the organization of DNA into chromatin.¹ 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.^{1,2} Trimethylation of histone H4 at lysine 20 (H4K20Me3) is enriched at pericentric heterochromatin and is associated with gene silencing.³ In senescent cells, H4K20Me3 is enriched at senescence-associated heterochromatin foci (SAHF), and levels of H4K20Me3 are increased in senescent cells compared with proliferating cells.⁴ H4K20Me3 levels are elevated in tumor tissue, compared with adjacent non-tumor tissue, isolated from patients with esophageal squamous cell carcinoma, and elevated H4K20Me3 levels are associated with lymph node involvement and poor prognosis in these patients.⁵ Cayman's Histone H4K20Me3 Monoclonal Antibody (RM208) can be used for ELISA, multiplex-based assay, and Western blot (WB) applications.

References

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. Schotta, G., Lachner, M., Sarma, K., *et al.* A silencing pathway to induce H3-K9 and H4-K20 trimethylation at constitutive heterochromatin. *Genes Dev.* **18**(11), 1251-1262 (2004).
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