

PRODUCT INFORMATION

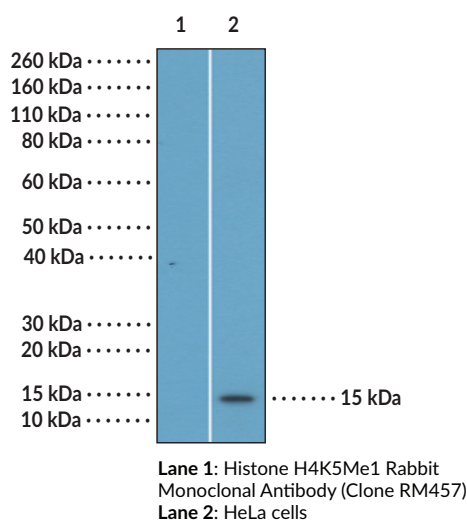
Histone H4K5Me1 Rabbit Monoclonal Antibody (Clone RM457)

Item No. 42792

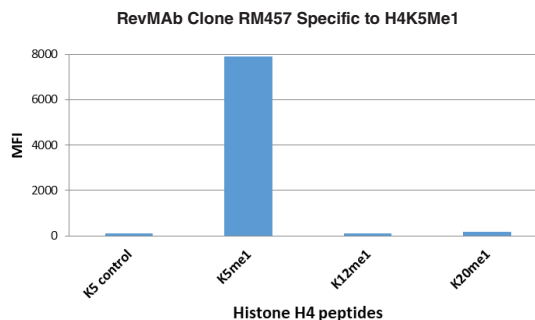
Overview and Properties

Contents:	This vial contains 100 µg of protein A-affinity purified antibody.
Synonym:	Monomethylated Histone H4 Lysine 5
Immunogen:	A peptide corresponding to H4K5Me1
Cross Reactivity:	(+) H4K5Me1; (-) Unmodified H4K5, H4K12Me1, H4K20Me1
Species Reactivity:	(+) Human, vertebrates
Molecular Weight:	15 kDa
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA, multiplex-based assay, and western blot (WB); the recommended starting concentration is 0.1 µg/ml–2 µg/ml for WB, 0.5 µg/ml–1 µg/ml for ELISA and 0.2 µg/ml–5 µg/ml for luminex. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of acid extracts of HeLa cells and recombinant histone H4 (1), using RM457 at 0.2 µg/ml, showed a band of histone H4 monomethylated at lysine 5 (H4K5Me1) in HeLa cells.



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} Histone H4 can be monomethylated at lysine 5 (H4K5Me1) by Set5, which is involved in cell growth and the stress response in yeast.³ H4K5 is also monomethylated by SMYD3 in HeLa cervical cancer cells.⁴ Cayman's Histone H4K5Me1 Rabbit Monoclonal Antibody (Clone RM457) can be used for ELISA, multiplex-based assay, and Western blot (WB) applications. The antibody recognizes H4K5Me1 at 15 kDa from human and other vertebrate samples.

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. Green, E.M., Mas, G., Young, N.L., *et al.* Methylation of H4 lysines 5, 8 and 12 by yeast Set5 calibrates chromatin stress responses. *Nat. Struct. Mol. Biol.* **19**(3), 361-363 (2012).
4. Van Aller, G.S., Reynoird, N., Barbash, O., *et al.* Smyd3 regulates cancer cell phenotypes and catalyzes histone H4 lysine 5 methylation. *Epigenetics* **7**(4), 340-343 (2012).

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