

PRODUCT INFORMATION



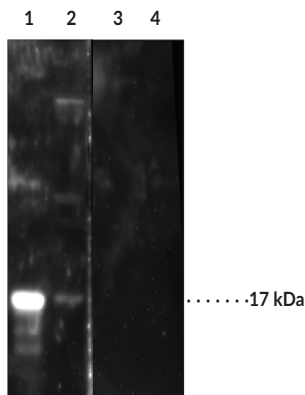
Histone H3K36Me2 Polyclonal Antibody

Item No. 18200

Overview and Properties

Contents:	This vial contains 500 µl of peptide affinity-purified polyclonal antibody.
Synonym:	Histone H3 containing dimethylated lysine 36
Immunogen:	Synthetic peptide from human histone H3 amino acids 26-44 (dimethyl K36) conjugated to KLH
Cross Reactivity:	(+) Histone H3 amino acids 26-44 (~10%), (+) Histone H3 dimethylated at lysine 9 (~10%), (+) Histone H3 monomethylated at lysine 36 (~10%), (+) Histone H3 trimethylated at lysine 36 (~10%)
Species Reactivity:	(+) Human; other species not tested
Uniprot No.:	P68431
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	TBS, pH 7.4, with 50% glycerol, 0.1% BSA, and 0.02% sodium azide
Host:	Rabbit
Applications:	ELISA and Western blot (WB); the recommended starting dilution is 1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: Core Histones (Item No. 11010) (16 µg)
Lane 2: HeLa Cell Lysate (50 µg)
Lane 3: Core Histones (Item No. 11010) (16 µg) + 10 µg/ml immunizing peptide
Lane 4: HeLa Cell Lysate (50 µg) + 10 µg/ml immunizing peptide

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 H3 is a nuclear protein and a component of the nucleosome core that is essential for organizing genomic DNA in eukaryotic nuclei.¹ It is a globular protein that contains an unstructured N-terminal tail that extends outside of the nucleosome core and is subject to various posttranslational modifications, including mono-, di-, and trimethylation at histone H3 lysine 36 (H3K36). Dimethylation of H3K36 is catalyzed by SET domain-containing histone methyltransferases including SET2, HYPB, NSD1, and ASH1L, and mutation of these methyltransferases is associated with various diseases, including multiple myeloma and Sotos syndrome.¹⁻³ H3K36Me2 is enriched at the coding regions of genes and correlates with the initiation, but not maintenance, of active transcription, heterochromatin maintenance, and DNA break repair.³⁻⁵ Cayman's Histone H3K36Me2 Polyclonal Antibody can be used for ELISA and Western blot applications. It detects H3K36Me2 at ~16 kDa from human samples.

References

1. Li, J., Ahn, J.H., and Wang, G.G. Understanding histone H3 lysine 36 methylation and its deregulation in disease. *Cell Mol. Life Sci.* **76(15)**, 2899-2916 (2019).
2. Sun, X.J., Wei, J., Wu, X.Y., *et al.* Identification and characterization of a novel human histone H3 lysine 36-specific methyltransferase. *J. Biol. Chem.* **280(42)**, 35261-35271 (2005).
3. Rao, B., Shibata, Y., Strahl, B.D., *et al.* Dimethylation of histone H3 at lysine 36 demarcates regulatory and nonregulatory chromatin genome-wide. *Mol. Cell. Biol.* **25(21)**, 9447-9459 (2005).
4. Li, B., Jackson, J., Simon, M.D., *et al.* Histone H3 lysine 36 dimethylation (H3K36me2) is sufficient to recruit the Rpd3s histone deacetylase complex and to repress spurious transcription. *J. Biol. Chem.* **284(12)**, 7970-7976 (2009).
5. Avdic, V., Zhang, P., Lanouette, S., *et al.* Structural and biochemical insights into MLL1 core complex assembly. *Structure* **19(1)**, 101-108 (2011).

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