

PRODUCT INFORMATION



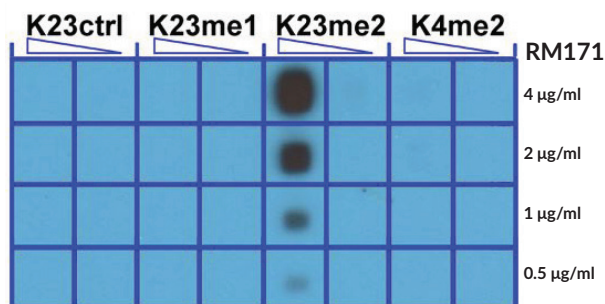
Histone H3K23Me2 Monoclonal Antibody (RM171)

Item No. 32150

Overview and Properties

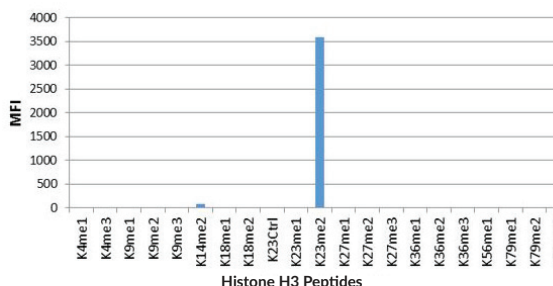
Contents: This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonym: Dimethylated Histone H3 Lysine 23
Immunogen: Peptide corresponding to H3K23Me2
Cross Reactivity: (+) H3K23Me2; (-) Unmodified H3K23, H3K23Me1, H3K4Me1, H3K4Me3, H3K9Me1, H3K9Me2, H3K9Me3, H3K14Me2, H3K18Me1, H3K18Me2, H3K27Me1, H3K27Me2, H3K27Me3, H3K36Me1, H3K36Me2, H3K36Me3, H3K56Me1, H3K79Me1, H3K79Me2, H3K79Me3
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: 1.0 mg/ml
Clone: RM171
Host: Rabbit
Isotype: IgG
Applications: ELISA, Multiplex-based assays, and Western blot (WB); the recommended starting concentration for ELISA and multiplex-based assays is 0.1-0.5 µg/ml and 0.5-2 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images

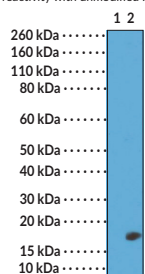


A peptide dot blot shows Histone H3K23Me2 Monoclonal Antibody (RM171) only reacts to H3K23Me2. No cross reactivity with unmodified H3K23, H3K23Me1, or H3K4Me2.

Histone H3K23Me2 Monoclonal Antibody (RM171) is Specific to H3K23Me2



Histone H3K23Me2 Monoclonal Antibody (RM171) specifically reacts to H3K23Me2. No cross reactivity with other methylated lysines in histone H3.



Lane 1: Recombinant histone H3.3
Lane 2: Acid extracts of HeLa cells

WB of recombinant histone H3.3 and acid extracts of HeLa cells using 0.5 µg/ml of Histone H3K23Me2 Monoclonal Antibody (RM171). This showed a band of H3K23Me2 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.

Copyright Cayman Chemical Company, 02/21/2024

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 H3 is a nuclear protein and a component of the nucleosome core, a basic unit of chromatin, 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 post-translational modifications (PTMs), including methylation, phosphorylation, acetylation, and citrullination.^{1,2} Dimethylation of histone H3 at lysine 23 (H3K23Me2) is a predominant histone modification in *C. elegans* and is associated with heterochromatin and gene suppression.^{3,4} Cayman's Histone H3K23Me2 Monoclonal Antibody (RM171) can be used for ELISA, multiplex-based assay, and Western blot (WB) applications.

References

1. Hyun, K., Jeon, J., Park, K., *et al.* Writing, erasing and reading histone lysine methylations. *Exp. Mol. Med.* **49(4)**, e324 (2017).
2. Sharda, A., Amnekar, R.V., Natu, A., *et al.* Histone posttranslational modifications: Potential role in diagnosis, prognosis, and therapeutics of cancer. *Prognostic Epigenetics*. Sharma, S., editor, *Academic Press* (2019).
3. Vandamme, J., Sidoli, S., Mariani, L., *et al.* H3K23me2 is a new heterochromatic mark in *Caenorhabditis elegans*. *Nucleic Acids Res.* **43(20)**, 9694-9710 (2015).
4. Myers, T.R., Amendola, P.G., Lussi, Y.C., *et al.* JMJD-1.2 controls multiple histone post-translational modifications in germ cells and protects the genome from replication stress. *Sci. Rep.* **8(1)**, 3765 (2018).

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