

PRODUCT INFORMATION



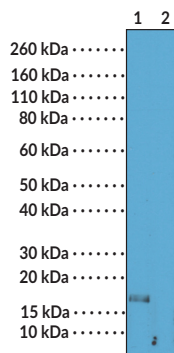
Histone H3K56Me1 Monoclonal Antibody (RM180)

Item No. 32169

Overview and Properties

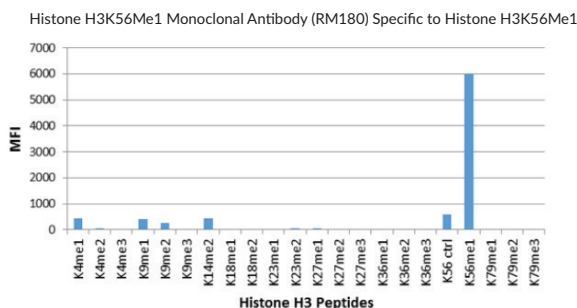
Contents: This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonym: Monomethylated Histone H3 Lysine 56
Immunogen: Peptide corresponding to H3K56Me1
Cross Reactivity: (+) H3K56Me1; (-) Unmodified H3K56, H3K4Me1, H3K4Me2, H3K4Me3, H3K9Me1, H3K9Me2, H3K9Me3, H3K14Me2, H3K18Me1, H3K18Me2, H3K23Me1, H3K23Me2, H3K27Me1, H3K27Me2, H3K27Me3, H3K36Me1, H3K36Me2, H3K36Me3, 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: RM180
Host: Rabbit
Isotype: IgG
Applications: ELISA, multiplex-based assays, and Western blot (WB); the recommended starting concentration is 0.2-1 µg/ml for ELISA, 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: Recombinant histone H3.3
Lane 2: Acid extracts of HeLa cells

WB of recombinant histone H3.3 protein and acid extracts of HeLa cells using Histone H3K56Me1 Monoclonal Antibody (RM180) at a concentration of 1 µg/ml.



Histone H3K56Me1 Monoclonal Antibody (RM180) specifically reacts to H3K56Me1. No cross reactivity with unmodified H3K56 or other methylations in histone H3.

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
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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} Monomethylated lysine 56 on histone H3 (H3K56Me1) interacts with proliferating cell nuclear antigen (PCNA) to regulate DNA replication.³ Cayman's H3K56Me1 Monoclonal Antibody (RM180) 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* **15**, 351-373 (2019).
3. Yu, Y., Song, C., Zhang, Q., *et al.* Histone H3 lysine 56 methylation regulates DNA replication through its interaction with PCNA. *Mol. Cell* **46(1)**, 7-17 (2012).

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