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Produktinformation

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- Diagnostik & molekulare Diagnostik
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siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
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- Expressversand

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PRODUCT INFORMATION

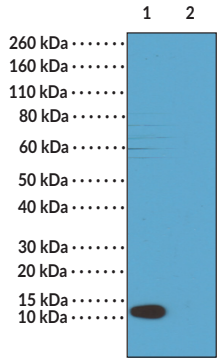
Histone H4K20Me3 Monoclonal Antibody

Item No. 32170

Overview and Properties

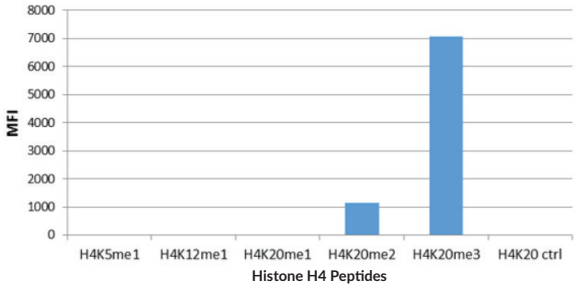
Contents:	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonym:	Trimethylated Histone H4 Lysine 20
Immunogen:	Peptide corresponding to H4K20Me3
Cross Reactivity:	(+) H4K20Me3, H4K20Me2 (weakly); (-) Unmodified H4K20, H4K20Me1, H4K5Me1, H4K12Me1
Species Reactivity:	(+) 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 at a concentration of 1 µg/ml.



Histone H4K20Me3 Monoclonal Antibody 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.

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PRODUCT INFORMATION

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 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).
4. Nelson, D.M., Jaber-Hijazi, F., Cole, J.J., *et al.* Mapping H4K20me3 onto the chromatin landscape of senescent cells indicates a function in control of cell senescence and tumor suppression through preservation of genetic and epigenetic stability. *Genome Biol.* **17(1)**, 158 (2016).
5. Zhou, M., Li, Y., Lin, S., *et al.* H3K9me3, H3K36me3, and H4K20me3 expression correlates with patient outcome in esophageal squamous cell carcinoma as epigenetic markers. *Dig. Dis. Sci.* **64(8)**, 2147-2157 (2019).

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