

Product Information

Monoclonal Anti-diMethyl-Histone H3 (diMe-Lys⁹) (H3K9me2)

Clone 5E5-G5

produced in mouse, purified immunoglobulin

Catalog Number **SAB4200609**

Product Description

Monoclonal Anti-diMethyl-Histone H3 (diMe-Lys⁹) (H3K9me2) (mouse IgG1 isotype) is derived from the hybridoma 5E5-G5 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a dimethylated (diMe-Lys⁹) peptide corresponding to the N-terminus of human histone H3, conjugated to KLH. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-diMethyl-Histone H3 (diMe-Lys⁹) (H3K9me2) recognizes human dimethyl-Histone H3 (diMe-Lys⁹) (not tested in other species). The antibody may be used in several immunochemical techniques including immunoblotting (~17 kDa) and immunofluorescence.

Histones are subjected to extensive covalent modifications, including phosphorylation, methylation, acetylation and ubiquitination thought to play an important role in development and in cancer.¹⁻² Histones H3 and H4 are the predominant histones modified by methylation and are highly methylated in mammalian cells.³⁻⁴ Histone methylation, like acetylation, is a complex, dynamic process involving a number of processes, including transcriptional regulation, chromatin condensation, mitosis, and heterochromatin assembly. Moreover, lysine residues can be mono-, di-, and tri-methylated, adding further complexity to the regulation of chromatin structure. Conserved lysine residues in the N-terminal tail domains of histone H3, Lys⁴, Lys⁹ and Lys²⁷ are the preferred sites of methylation.^{1,4-6} Methylation of H3 at Lys⁹ is a modification intrinsically linked to epigenetic silencing and heterochromatin assembly.⁷

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8°C for up to one month. For extended storage, freeze at -20°C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 2-4 µg/mL is recommended using histones isolated from human HeLa cells.

Immunofluorescence: a working concentration of 1-2 µg/mL is recommended using human HeLa cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

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6. Bird, A., *Science*, **294**, 2113-2115 (2001).
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