

Product Information

Monoclonal Anti-methyl-Histone H4 (Me-Lys²⁰)

clone 5E10-D8, produced in mouse, purified immunoglobulin

Catalog Number **SAB4200252**

Product Description

Monoclonal Anti-methyl-Histone H4 (Me-Lys²⁰) (mouse IgG1 isotype) is derived from the hybridoma 5E10-D8 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a peptide containing methylated lysine 20 of human Histone H4 (GeneID: 121504), 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-methyl-Histone H4 (Me-Lys²⁰) recognizes human, rat and mouse methylated Histone H4 (Lys²⁰). The antibody may be used in several immunochemical techniques including immunoblotting (~14 kDa), immunofluorescence and immunohistochemistry.

Histones are basic nuclear proteins that are responsible for the nucleosome structure of chromosomal fibers in eukaryotes. Nucleosomes consist of ~146 bp of DNA wrapped around a histone octamer composed of pairs of each of the four core histones (H2A, H2B, H3, and H4). The chromatin fiber is further compacted through the interaction of a linker histone, H1, with the DNA between the nucleosomes to form higher order chromatin structures. Histones are subjected to several covalent modifications, such as phosphorylation, methylation, acetylation and ubiquitination that affect chromatin structure and regulate chromatin activity. Histone modifications are thought to play an important role in cancer and disease. Histone H4 can be mono-, di-, or trimethylated on Lysine 20 (H4K20) *in vivo*, and all three methylated forms are evolutionarily conserved from yeast to human. H4K20 methylated forms have been implicated in transcriptional silencing, DNA repair, higher order chromatin structure, differentiation, genomic stability and cell division.¹⁻⁶

Reagent

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

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 1.0-2.0 µg/mL is recommended using histones isolated from human HeLa cells.

Indirect Immunofluorescence: a working concentration of 2.5-5.0 µg/mL is recommended using mouse 3T3 cells or rat NRK 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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