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Product Information

Anti-Acetyl-Histone H3 [Ac-Lys^{23}]
produced in rabbit, IgG fraction of antiserum

Catalog Number **SAB4200389**

Product Description

Anti-Acetyl-Histone H3 [Ac-Lys^{23}] is produced in rabbit using as immunogen a synthetic acetylated peptide containing acetylated Lys^{23} of human histone H3 (GeneID: 8290), conjugated to KLH. The corresponding sequence is identical in many species including rat and mouse histone H3. Whole antiserum is purified using protein A immobilized on agarose to provide the IgG fraction of antiserum.

Anti-Acetyl-Histone H3 [Ac-Lys^{23}] specifically recognizes human and mouse [Ac-Lys^{23}] Histone H3. The antibody may be used in several immunochemical techniques including immunoblotting (~15 kDa), immunofluorescence and immunohistochemistry. Detection of the acetylated histone H3 [Ac-Lys^{23}] band by immunoblotting is specifically inhibited by the acetylated histone H3 [Ac-Lys^{23}] immunizing peptide, but not by the corresponding non-acetylated histone H3 peptide.

Histones are subjected to several covalent modifications, such as phosphorylation, methylation, acetylation and ubiquitination, that affect chromatin structure and regulate chromatin activity.[1,2] Histone modifications are thought to play an important role in cancer and disease.[3] These modifications may alter chromatin structure and recruit downstream chromatin-associated proteins involved in transcription regulation. These in turn, may dictate dynamic transitions between transcriptionally active or silent chromatin states. Histones H3 and H4 are the predominant histones subjected to extensive covalent modifications.[4,5] Active chromatin is also correlated with the hyperacetylation of histone tail. Histone H3 can be reversibly acetylated at Lys residues 9, 14, 18, 23, 27, 36 and 56. Histone H3 is acetylated at Lys^{18} by CBP/p300 following estrogen stimulation, leading to acetylation of Lys^{23}, and methylation of Arg^{17} by CARM1.[6] These events lead to transcriptional activation of the estrogen-responsive genes. Renal failure has been shown to increase cardiac histone H3 acetylation of Lys^{23} and Lys^{9}, dimethylation of Lys^{4}, and phosphorylation of Ser^{10}, and to induce cardiomyopathy-related genes in a mice model of type 2 diabetes.[7]

Reagent

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

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 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 dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working dilution of 1:2500-1:5,000 is recommended using lysates of sodium butyrate treated NIH3T3 cells.

Immunofluorescence: a working dilution of 1:200-1:400 is recommended using HeLa cells.

Immunohistochemistry: a working dilution of 1:100-1:200 is recommended using formalin-fixed paraffin-embedded human breast carcinoma.

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

References

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