

Product Information

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Anti-Histone H3 (N-terminal)

produced in rabbit, affinity isolated antibody

Catalog Number **H9289**

Product Description

Anti-Histone H3 (N-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 1-20 of human histone H3 (GeneID: 8350), conjugated to KLH. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Histone H3 (N-terminal) specifically recognizes human histone H3 (~17 kDa). Staining of the histone H3 band in immunoblotting is specifically inhibited by the immunizing peptide.

In eukaryotic cells DNA is packaged into chromatin. The building block of chromatin is the nucleosome, which is comprised of an octamer of core histones (H2A, H2B, H3, and H4) around which 147 bp of DNA are wrapped. Linker histone H1 binds to DNA between nucleosomal core particles and is involved in establishing and maintaining 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.^{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 modified by methylation and are highly methylated in mammalian cells.^{4,5} Histone methylation, like acetylation, is a complex, dynamic process involved in a number of processes, including transcriptional regulation, chromatin condensation, mitosis, and heterochromatin assembly. Histones can be mono-, di-, and tri-methylated at different heterochromatic subdomains, adding further complexity to the regulation of chromatin structure.

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: ~1.5 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 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 antibody concentration of 0.2-0.5 µg/mL is recommended using A431 cells.

Indirect immunofluorescence: a working concentration of 2-4 µg/mL is recommended using A431 cells.

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

References

1. Fischle, W., et al., *Curr. Opin. Cell Biol.*, **15**, 172-183 (2003).
2. Strahl, B.D., and Allis, C.D., *Nature*, **403**, 41-45 (2000).
3. Schneider, R., et al., *Trends Biochem.*, **27**, 396-402 (2002).
4. Strahl, B.D., et al., *Proc. Natl. Acad. Sci. USA*, **96**, 14967-14972 (1999).
5. Rice, J.C., and Allis, C.D., *Curr. Opin. Cell Biol.*, **13**, 263-273 (2001).

ER,CS,PHC 11/07-1

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