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Product Information

Anti-Histone Deacetylase 6 (HDAC6)
produced in rabbit, IgG fraction of antiserum

Catalog Number **H2287**

Product Description

Anti-Histone Deacetylase 6 (HDAC6), is produced in rabbit using a synthetic peptide corresponding to amino acid residues 1199-1213 of human HDAC6, conjugated to KLH as immunogen. The corresponding sequence in mouse differs by one amino acid. Whole antiserum is purified to provide an IgG fraction of antiserum.

Anti-Histone Deacetylase 6 (HDAC6) recognizes human and mouse HDAC6 (~134 kDa). Applications include immunoblotting and immunoprecipitation. Detection of HDAC6 by immunoblotting is specifically inhibited with the immunizing peptide. Additional non-specific bands of approx. 50 kDa may be detected in various extract preparations.

Regulation of gene expression is mediated by several mechanisms. Among them are DNA methylation, ATP-dependent chromatin remodeling, and posttranslational modifications of histones, such as the dynamic acetylation and deacetylation of ε-amino groups of lysine residues present in the tail of core histones.[1] The enzymes responsible for this reversible acetylation/-deacetylation process are histone acetyltransferases (HATs) and histone deacetylases (HDACs), respectively.[2] HATs act as transcriptional coactivators and HDACs are part of transcriptional corepressor complexes.[3]

Mammalian HDACs can be divided into three classes according to sequence homology.[4] Class I consists of the yeast Rpd3-like proteins HDAC1, HDAC2, HDAC3 and HDAC8. Class II consists of the yeast Hda1-like proteins HDAC4, HDAC5, HDAC6, HDAC7, HDAC9 and HDAC10.[5] Class III consists of the yeast Sir2-like proteins. Whereas class I HDACs are ubiquitously expressed, most class II HDACs are tissue-specific.[2] Class II HDACs are larger than those of class I and their catalytic domain is located in the carboxy-terminal half of the protein. HDAC6 is a unique deacetylase among class II members in that it contains a duplicate of the catalytic domain in its NH_2 terminus as well.[2] The deacetylase activity of class II HDACs is regulated by subcellular localization.[4] Endogenous HDAC6 is predominantly cytoplasmic where it associates with microtubules and functions as an α-tubulin deacetylase.[6] HDAC6 contains a conserved zinc finger motif that is probably involved in the regulation of ubiquitination.[7]

Reagent

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

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

Store –20 °C. For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at –20 °C. 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 minimum working antibody dilution of 1:1,000 is recommended using 293T cells expressing recombinant mouse HDAC6 in a chemiluminescent detection system.

Immunoprecipitation: 5-10 µg of the antibody immunoprecipitates HDAC6 from a RIPA extract of 500 µg of 293T cells expressing recombinant mouse HDAC6.

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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