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HDAC1 Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP13296a

Specification

HDAC1 Antibody (N-term) Blocking peptide - Product Information

Primary Accession Q13547

HDAC1 Antibody (N-term) Blocking peptide - Additional Information

Gene ID 3065

Other Names
Histone deacetylase 1, HD1, HDAC1, RPD3L1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP13296a was selected from the N-term region of HDAC1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

HDAC1 Antibody (N-term) Blocking peptide - Protein Information

Name HDAC1 {ECO:0000303|PubMed:10846170, ECO:0000312|HGNC:HGNC:4852}

Function
Histone deacetylase that catalyzes the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4) (PubMed:16762839, PubMed:17704056, PubMed:28497810). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events (PubMed:16762839, PubMed:17704056). Histone deacetylases act via the formation of large multiprotein complexes (PubMed:16762839, PubMed:17704056). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of

chromatin (PubMed:16428440, PubMed:28977666). Also functions as deacetylase for non-histone targets, such as NR1D2, RELA, SP1, SP3 and TSHZ3 (PubMed:12837748, PubMed:16478997, PubMed:17996965, PubMed:19343227). Deacetylates SP proteins, SP1 and SP3, and regulates their function (PubMed:12837748, PubMed:16478997). Component of the BRG1-RB1-HDAC1 complex, which negatively regulates the CREST-mediated transcription in resting neurons (PubMed:19081374). Upon calcium stimulation, HDAC1 is released from the complex and CREBBP is recruited, which facilitates transcriptional activation (PubMed:19081374). Deacetylates TSHZ3 and regulates its transcriptional repressor activity (PubMed:19343227). Deacetylates 'Lys-310' in RELA and thereby inhibits the transcriptional activity of NF-kappa-B (PubMed:17000776). Deacetylates NR1D2 and abrogates the effect of KAT5- mediated relieving of NR1D2 transcription repression activity (PubMed:17996965). Component of a RCOR/GFI/KDM1A/HDAC complex that suppresses, via histone deacetylase (HDAC) recruitment, a number of genes implicated in multilineage blood cell development (By similarity). Involved in CIART-mediated transcriptional repression of the circadian transcriptional activator: CLOCK-BMAL1 heterodimer (By similarity). Required for the transcriptional repression of circadian target genes, such as PER1, mediated by the large PER complex or CRY1 through histone deacetylation (By similarity). In addition to protein deacetylase activity, also has protein-lysine deacylase activity: acts as a protein decrotonylase by mediating decrotonylation ((2E)-butenoyl) of histones (PubMed:28497810).

Cellular Location
Nucleus

Tissue Location
Ubiquitous, with higher levels in heart, pancreas and testis, and lower levels in kidney and brain

HDAC1 Antibody (N-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

HDAC1 Antibody (N-term) Blocking peptide - Images

HDAC1 Antibody (N-term) Blocking peptide - Background

Histone acetylation and deacetylation, catalyzed bymultisubunit complexes, play a key role in the regulation ofeukaryotic gene expression. The protein encoded by this genebelongs to the histone deacetylase/acuc/apha family and is acomponent of the histone deacetylase complex. It also interactswith retinoblastoma tumor-suppressor protein and this complex is akey element in the control of cell proliferation anddifferentiation. Together with metastasis-associated protein-2, itdeacetylates p53 and modulates its effect on cell growth andapoptosis.

HDAC1 Antibody (N-term) Blocking peptide - References

Yang, Z., et al. Clin. Chem. Lab. Med. 48(12):1785-1791(2010)Grausenburger, R., et al. J. Immunol. 185(6):3489-3497(2010)Miller, K.M., et al. Nat. Struct. Mol. Biol. 17(9):1144-1151(2010)Brandt, S., et al. Int. J. Biochem. Cell Biol. 42(9):1472-1481(2010)Leone, V., et al. Oncogene 29(30):4341-4351(2010)