10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

HDAC3 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP1103b

Specification

HDAC3 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession O15379

HDAC3 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 8841

Other Names
Histone deacetylase 3, HD3, RPD3-2, SMAP45, HDAC3

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP1103b was selected from the C-term region of human HDAC3. 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.

HDAC3 Antibody (C-term) Blocking Peptide - Protein Information

Name HDAC3

Function
Histone deacetylase that catalyzes the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4), and some other non-histone substrates (PubMed:23911289, PubMed:21030595, PubMed:21444723, PubMed:25301942, PubMed:28497810, PubMed:28167758, PubMed:32404892). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events (PubMed:23911289). Histone

deacetylases act via the formation of large multiprotein complexes (PubMed:23911289). Participates in the BCL6 transcriptional repressor activity by deacetylating the H3 'Lys- 27' (H3K27) on enhancer elements, antagonizing EP300 acetyltransferase activity and repressing proximal gene expression (PubMed:23911289). Acts as a molecular chaperone for shuttling phosphorylated NR2C1 to PML bodies for sumoylation (By similarity). Contributes, together with XBP1 isoform 1, to the activation of NFE2L2-mediated HMOX1 transcription factor gene expression in a PI(3)K/mTORC2/Akt-dependent signaling pathway leading to endothelial cell (EC) survival under disturbed flow/oxidative stress (PubMed:25190803). Regulates both the transcriptional activation and repression phases of the circadian clock in a deacetylase activity-independent manner (By similarity). During the activation phase, promotes the accumulation of ubiquitinated BMAL1 at the E-boxes and during the repression phase, blocks FBXL3-mediated CRY1/2 ubiquitination and promotes the interaction of CRY1 and BMAL1 (By similarity). The NCOR1-HDAC3 complex regulates the circadian expression of the core clock gene BMAL1 and the genes involved in lipid metabolism in the liver (By similarity). Also functions as a deacetylase for non-histone targets, such as KAT5, MEF2D, MAPK14, RARA and STAT3 (PubMed:15653507, PubMed:21030595, PubMed:21444723, PubMed:25301942, PubMed:28167758). Serves as a corepressor of RARA, mediating its deacetylation and repression, leading to inhibition of RARE DNA element binding (PubMed:28167758). In association with RARA, plays a role in the repression of microRNA-10a and thereby in the inflammatory response (PubMed:28167758). In addition to protein deacetylase activity, also acts as a protein-lysine deacylase by recognizing other acyl groups: catalyzes removal of (2E)-butenoyl (crotonyl) and 2-hydroxyisobutanoyl (2-hydroxyisobutyryl) acyl groups from lysine residues, leading to protein decrotonylation and de-2- hydroxyisobutyrylation, respectively (PubMed:28497810, PubMed:29192674, PubMed:34608293). Catalyzes decrotonylation of MAPRE1/EB1 (PubMed:34608293).

Cellular Location
Nucleus. Cytoplasm. Cytoplasm, cytosol. Note=Colocalizes with XBP1 and AKT1 in the cytoplasm (PubMed:25190803). Predominantly expressed in the nucleus in the presence of CCAR2 (PubMed:21030595)

Tissue Location
Widely expressed.

HDAC3 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

HDAC3 Antibody (C-term) Blocking Peptide - Images

HDAC3 Antibody (C-term) Blocking Peptide - Background

Histones play a critical role in transcriptional regulation, cell cycle progression, and developmental events. Histone acetylation/deacetylation alters chromosome structure and affects transcription

factor access to DNA. HDAC3 belongs to the histone deacetylase/acuc/apha family. It has histone deacetylase activity and represses transcription when tethered to a promoter. It may participate in the regulation of transcription through its binding with the zinc-finger transcription factor YY1. This protein can also down-regulate p53 function and thus modulate cell growth and apoptosis. HDAC3 isregarded as a potential tumor suppressor gene.

HDAC3 Antibody (C-term) Blocking Peptide - References

Meinke PT and Liberator P. Curr Med Chem, 8(2): 211- 235 (2001).Nakayama T and Takami Y. J Biochem (Tokyo) 129 (4): 491-499 (2001).Cress, W.D. and Seto, E. J. Cell. Physiol. 184, 1-16 (2000).