

HDAC3 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP1103a**Specification**

HDAC3 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [O15379](#)**HDAC3 Antibody (N-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 [AP1103a](/product/products/AP1103a) was selected from the N-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 (N-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](http://www.uniprot.org/citations/23911289), PubMed: [21030595](http://www.uniprot.org/citations/21030595), PubMed: [21444723](http://www.uniprot.org/citations/21444723), PubMed: [25301942](http://www.uniprot.org/citations/25301942), PubMed: [28497810](http://www.uniprot.org/citations/28497810), PubMed: [28167758](http://www.uniprot.org/citations/28167758), PubMed: [32404892](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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 (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

HDAC3 Antibody (N-term) Blocking Peptide - Images

HDAC3 Antibody (N-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 is regarded as a potential tumor suppressor gene.

HDAC3 Antibody (N-term) Blocking Peptide - References

Ishizuka, T., et al., Mol. Cell. Biol. 23(15):5122-5131 (2003). Weiss, C., et al., EMBO J. 22(14):3686-3695 (2003). Murphy, J.C., et al., EMBO J. 21(5):1112-1120 (2002). Zhang, J., et al., Mol. Cell 9(3):611-623 (2002). Juan, L.J., et al., J. Biol. Chem. 275(27):20436-20443 (2000).