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HDAC3 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10447

Specification

HDAC3 Antibody - Product Information

Application	**WB**
Primary Accession	O15379
Other Accession	NP_003874
Reactivity	**Human, Mouse, Rat, Chicken**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**48848**

HDAC3 Antibody - Additional Information

Gene ID 8841

Application & Usage

Western blotting (0.5-4 µg/ml)and Immunohistochemistry (20-30 µg/ml). However, the optimal conditions should be determined individually.The antibody detects the 49 kDa HDAC3. It does not cross-react with other HDAC proteins including HDAC1, 2, 4, 5, 6, 7, and 8. Jurkat cell lysate can be used as a positive control.

Other Names
SMAP45 , HD3 , RPD3 , RPD3-2

Target/Specificity
HDAC3

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.2 mg/ml) peptide affinity purified rabbit anti-HDAC3 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
HDAC3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

HDAC3 Antibody - 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 and RARA (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:<a

href="http://www.uniprot.org/citations/34608293" target="_blank">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)

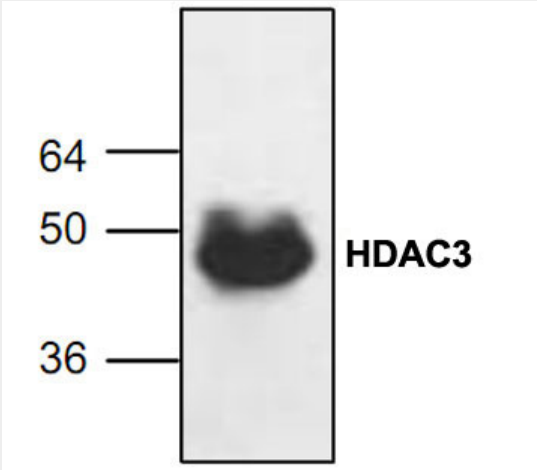
Tissue Location
Widely expressed.

HDAC3 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

HDAC3 Antibody - Images



Western blot analysis of HDAC3 expression in Jurkat cell lysate.

HDAC3 Antibody - Background

HDAC3 is a member of the class I mammalian histone deacetylase family, which plays an important role in modulating the eukaryotic chromatin structure. Human HDAC3 is composed of 428 amino acid residues. HDAC3 interacts with a growing number of transcriptional factors including SMRT and N-CoR. The interacting complexes bind to specific regions of chromatin and regulate gene transcription in these regions.