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Goat Anti-HDAC3 Antibody (internal region)

Purified Goat Polyclonal Antibody
Catalog # AF4260a

Specification

Goat Anti-HDAC3 Antibody (internal region) - Product Information

Application	**WB**
Primary Accession	O15379
Other Accession	15183(mouse), 84578(rat), NP_003874.2
Reactivity	**Human**
Predicted	**Human, Mouse, Rat, Pig, Cow, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5**
Calculated MW	**48848**

Goat Anti-HDAC3 Antibody (internal region) - Additional Information

Gene ID 8841

Other Names
HDAC3; histone deacetylase 3; HD3; RPD3; RPD3-2; SMAP45

Format
Supplied at 0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin. Aliquot and store at -20°C. Minimize freezing and thawing.

Immunogen
Peptide with sequence C-NHAPSVQIHDVPAD , from the internal region of the protein sequence according to NP_003874.2.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-HDAC3 Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-HDAC3 Antibody (internal region) - 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:<a

href="http://www.uniprot.org/citations/21030595" target="_blank">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.

Goat Anti-HDAC3 Antibody (internal region) - Protocols

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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

Goat Anti-HDAC3 Antibody (internal region) - Images

AF4260a (0.1 µg/ml) staining of Jurkat nuclear lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-HDAC3 Antibody (internal region) - References

Histone deacetylase 3 participates in self-renewal of liver cancer stem cells through histone modification. Liu C, Liu L, Shan J, Shen J, Xu Y, Zhang Q, Yang Z, Wu L, Xia F, Bie P, Cui Y, Zhang X, Bian X, Qian C. Cancer letters 2013 Oct 339 (1): 60-9.