

**HDAC3 Antibody (C-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP13297b****Specification**

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**HDAC3 Antibody (C-term) - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">O15379</a>
Other Accession	<a href="#">Q6P6W3</a> , <a href="#">O88895</a> , <a href="#">NP_003874.2</a>
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	48848
Antigen Region	383-412

**HDAC3 Antibody (C-term) - Additional Information****Gene ID** 8841**Other Names**

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

**Target/Specificity**

This HDAC3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 383-412 amino acids from the C-terminal region of human HDAC3.

**Dilution**

WB~~1:1000

IHC-P~~1:10~50

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

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

**Precautions**

HDAC3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**HDAC3 Antibody (C-term) - 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.

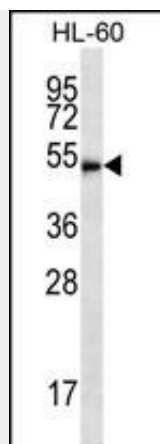
### **HDAC3 Antibody (C-term) - Protocols**

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

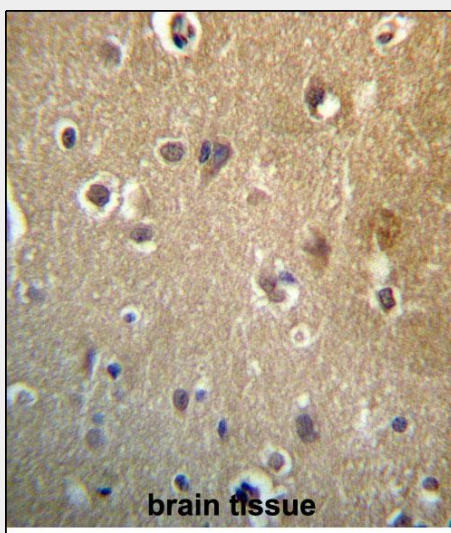
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **HDAC3 Antibody (C-term) - Images**





HDAC3 Antibody (C-term) (Cat. #AP13297b) western blot analysis in HL-60 cell line lysates (35ug/lane). This demonstrates the HDAC3 antibody detected the HDAC3 protein (arrow).



HDAC3 Antibody (C-term) (Cat. #AP13297b) immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of HDAC3 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

### HDAC3 Antibody (C-term) - 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. The protein encoded by this gene 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. This gene is regarded as a potential tumor suppressor gene. [provided by RefSeq].

### HDAC3 Antibody (C-term) - References

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Yang, Z., et al. Clin. Chem. Lab. Med. (2010) In press :  
Kim, T., et al. Psychiatry Res 178(2):266-269(2010)  
Adams, H., et al. Expert Opin. Ther. Targets 14(6):577-584(2010)