

HDAC1 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10445**Specification**

HDAC1 Antibody - Product Information

Application	WB
Primary Accession	Q13547
Other Accession	NP_004955
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	55103

HDAC1 Antibody - Additional Information**Gene ID** 3065

Application & Usage	Western blotting (0.5-4 µg/ml), Immunoprecipitation (10-20 µg/ml), and Immunohistochemistry (10-20 µg/ml). However, the optimal conditions should be determined individually. The antibody detects the 62 kDa histone deacetylase 1. It does not cross-react with other HDAC proteins including HDAC2, 3, 4, 5, 6, 7, and 8.
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Other Names

HD1, HD-1, HDAC-1, Histone Deacetylase 1, RPD3, RPD3L1, Reduced Potassium Dependency 3, Like-1

Target/Specificity

HDAC1

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.5 mg/ml) peptide affinity purified rabbit anti-HDAC1 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**

HDAC1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

HDAC1 Antibody - Protein Information

Name HDAC1 {ECO:0000303|PubMed:10846170, ECO:0000312|HGNC:HGNC:4852}

Function

Histone deacetylase that catalyzes the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4) (PubMed:16762839, PubMed:17704056, PubMed:28497810). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events (PubMed:16762839, PubMed:17704056). Histone deacetylases act via the formation of large multiprotein complexes (PubMed:16762839, PubMed:17704056). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (PubMed:16428440, PubMed:28977666). As part of the SIN3B complex is recruited downstream of the constitutively active genes transcriptional start sites through interaction with histones and mitigates histone acetylation and RNA polymerase II progression within transcribed regions contributing to the regulation of transcription (PubMed:21041482). Also functions as a deacetylase for non-histone targets, such as NR1D2, RELA, SP1, SP3, STAT3 and TSHZ3 (PubMed:12837748, PubMed:16285960, PubMed:16478997, PubMed:17996965, PubMed:19343227). Deacetylates SP proteins, SP1 and SP3, and regulates their function (PubMed:12837748, PubMed:16478997). Component of the BRG1-RB1-HDAC1 complex, which negatively regulates the CREST-mediated transcription in resting neurons (PubMed:19081374). Upon calcium stimulation, HDAC1 is released from the complex and CREBBP is recruited, which facilitates transcriptional activation (PubMed:19081374). Deacetylates TSHZ3 and regulates its transcriptional repressor activity (PubMed:19343227). Deacetylates 'Lys-310' in RELA and thereby inhibits the transcriptional activity of NF-kappa-B (PubMed:17000776). Deacetylates NR1D2 and abrogates the effect of KAT5- mediated relieving of NR1D2 transcription repression activity (PubMed:17996965).

target="_blank">17996965). Component of a RCOR/GFI/KDM1A/HDAC complex that suppresses, via histone deacetylase (HDAC) recruitment, a number of genes implicated in multilineage blood cell development (By similarity). Involved in CIART-mediated transcriptional repression of the circadian transcriptional activator: CLOCK-BMAL1 heterodimer (By similarity). Required for the transcriptional repression of circadian target genes, such as PER1, mediated by the large PER complex or CRY1 through histone deacetylation (By similarity). In addition to protein deacetylase activity, also has protein-lysine deacylase activity: acts as a protein decrotonylase by mediating decrotonylation ((2E)-butenoyl) of histones (PubMed:28497810).

Cellular Location

Nucleus

Tissue Location

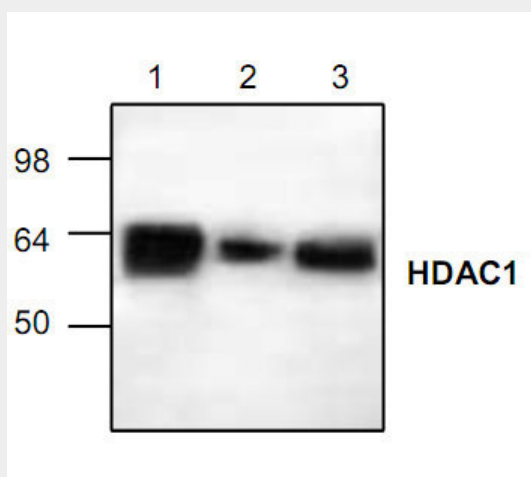
Ubiquitous, with higher levels in heart, pancreas and testis, and lower levels in kidney and brain

HDAC1 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 Cytometry](#)
- [Cell Culture](#)

HDAC1 Antibody - Images



Western blot analysis of HDAC1 expression with lysates from mouse small intestine (Lane 1), Jurkat cells (Lane 2), and rat kidney (Lane 3).

HDAC1 Antibody - Background

HDAC1 is an active component of transcriptional corepressor complexes which can be recruited to specific promoter regions via transcriptional factors. HDAC1 catalyzes removal of acetyl-groups from acetyl-lysines of histones and promotes compaction of chromatin in these regions, which leads

to the inhibition of gene transcription.