

Histone deacetylase 1 Polyclonal Antibody

Catalog # AP70328

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	Q13547
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55103

Additional Information

Gene ID	3065
Other Names	HDAC1; RPD3L1; Histone deacetylase 1; HD1
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/10000. Not yet tested in other applications. IHC-P~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/10000. Not yet tested in other applications. IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

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](#)). 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 deacetylase activity: acts as a protein deacetylase and delactylase by mediating deacetylation ((2E)-butenoyl) and delactylation (lactoyl) of histones, respectively (PubMed:[28497810](#), PubMed:[35044827](#)).

Cellular Location

Nucleus

Tissue Location

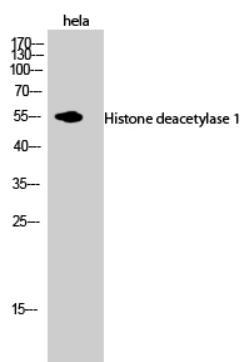
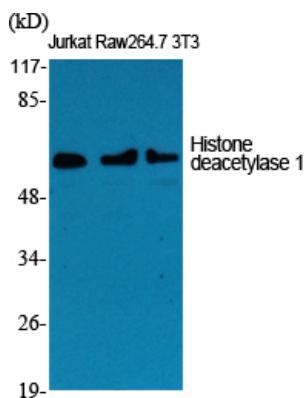
Ubiquitous, with higher levels in heart, pancreas and testis, and lower levels in kidney and brain

Background

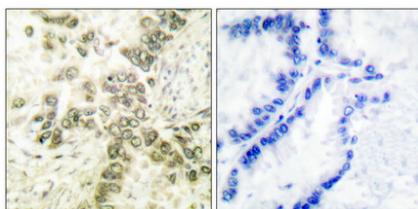
Responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events. Histone deacetylases act via the formation of large multiprotein complexes. Deacetylates SP proteins, SP1 and SP3, and regulates their function. Component of the BRG1-RB1-HDAC1 complex, which negatively regulates the CREST-mediated transcription in resting neurons. Upon calcium stimulation, HDAC1 is released from the complex and CREBBP is recruited, which facilitates transcriptional activation. Deacetylates TSHZ3 and regulates its transcriptional repressor activity. Deacetylates 'Lys-310' in RELA and thereby inhibits the transcriptional activity of NF-kappa-B. Deacetylates NR1D2 and abrogates the effect of KAT5-mediated relieving of NR1D2 transcription repression activity. 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. Involved in CIART-mediated transcriptional repression of the circadian transcriptional activator: CLOCK-ARNTL/BMAL1 heterodimer. Required for the transcriptional repression of circadian target genes, such as PER1, mediated by the large PER complex or CRY1 through histone deacetylation.

Images

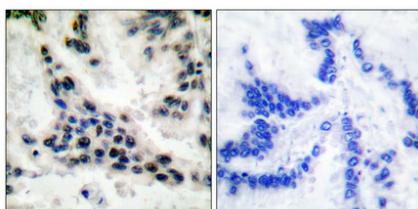
Western Blot analysis of various cells using Histone deacetylase 1 Polyclonal Antibody diluted at 1 : 1000



Western Blot analysis of heLa cells using Histone deacetylase 1 Polyclonal Antibody diluted at 1 : 1000



Immunohistochemical analysis of paraffin-embedded Human lung cancer. Antibody was diluted at 1:100(4°,overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negative control (right) obtained from antibody was pre-absorbed by immunogen peptide.



Immunohistochemical analysis of paraffin-embedded Human lung cancer. Antibody was diluted at 1:100(4°,overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negative control (right) obtained from antibody was pre-absorbed by immunogen peptide.

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