

# HDAC7 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP1107a

## Product Information

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|-------------------|---------------------------|
| Application       | WB, E                     |
| Primary Accession | <a href="#">Q8WUI4</a>    |
| Other Accession   | <a href="#">NP_056216</a> |
| Reactivity        | Human                     |
| Host              | Rabbit                    |
| Clonality         | Polyclonal                |
| Isotype           | Rabbit IgG                |
| Clone Names       | RB5656                    |
| Calculated MW     | 102927                    |
| Antigen Region    | 920-952                   |

## Additional Information

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|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gene ID            | 51564                                                                                                                                                                                     |
| Other Names        | Histone deacetylase 7, HD7, Histone deacetylase 7A, HD7a, HDAC7, HDAC7A                                                                                                                   |
| Target/Specificity | This HDAC7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 920-952 amino acids from the C-terminal region of human HDAC7.                    |
| Dilution           | WB~~1:1000 E~~Use at an assay dependent concentration.                                                                                                                                    |
| Format             | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS. |
| 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        | HDAC7 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.                                                                                 |

## Protein Information

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| Name     | HDAC7                                                                                                                                           |
| Synonyms | HDAC7A                                                                                                                                          |
| Function | Responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4) (By similarity). Histone |

deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events (By similarity). Histone deacetylases act via the formation of large multiprotein complexes (By similarity). Involved in muscle maturation by repressing transcription of myocyte enhancer factors such as MEF2A, MEF2B and MEF2C (By similarity). During muscle differentiation, it shuttles into the cytoplasm, allowing the expression of myocyte enhancer factors (By similarity). May be involved in Epstein-Barr virus (EBV) latency, possibly by repressing the viral BZLF1 gene (PubMed:[12239305](#)). Positively regulates the transcriptional repressor activity of FOXP3 (PubMed:[17360565](#)). Serves as a corepressor of RARA, causing its deacetylation and 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](#)). Also acetylates non-histone proteins, such as ALKBH5 (PubMed:[37369679](#)).

### Cellular Location

Nucleus. Cytoplasm Note=In the nucleus, it associates with distinct subnuclear dot-like structures (PubMed:11262386). Shuttles between the nucleus and the cytoplasm (PubMed:16980613). In muscle cells, it shuttles into the cytoplasm during myocyte differentiation (By similarity). The export to cytoplasm depends on the interaction with the 14-3-3 protein YWHAE and is due to its phosphorylation (PubMed:16980613)  
{ECO:0000250|UniProtKB:Q8C2B3, ECO:0000269|PubMed:11262386, ECO:0000269|PubMed:16980613}

## Background

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Histone deacetylase (HDAC) and histone acetyltransferase (HAT) are enzymes that regulate transcription by selectively deacetylating or acetylating the epsilon-amino groups of lysines located near the amino termini of core histone proteins (1). Eight members of HDAC family have been identified in the past several years (2,3). These HDAC family members are divided into two classes, I and II. Class I of the HDAC family comprises four members, HDAC-1, 2, 3, and 8, each of which contains a deacetylase domain exhibiting from 45 to 93% identity in amino acid sequence. Class II of the HDAC family comprises HDAC-4, 5, 6, and 7, the molecular weights of which are all about two-fold larger than those of the class I members, and the deacetylase domains are present within the C-terminal regions, except that HDAC-6 contains two copies of the domain, one within each of the N-terminal and C-terminal regions. Human HDAC-1, 2 and 3 were expressed in various tissues, but the others (HDAC-4, 5, 6, and 7) showed tissue-specific expression patterns (3). These results suggested that each member of the HDAC family exhibits a different, individual substrate specificity and function in vivo.

## References

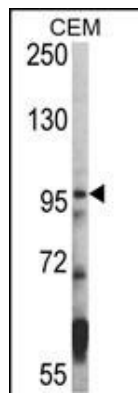
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Meinke PT and Liberatore P. *Curr Med Chem*, 8(2): 211- 235 (2001).  
Nakayama T and Takami Y. *J Biochem (Tokyo)* 129 (4): 491-499 (2001).  
Cress, W.D. and Seto, E. J. *Cell. Physiol.* 184, 1-16 (2000).

## Images

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Western blot analysis of hHDAC7-A935 (Cat. #AP1107a) in CEM cell line lysates (35ug/lane). HDAC7 (arrow) was detected using the purified Pab.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.