

**Anti-HDAC7 (RABBIT) Antibody**  
**HDAC7 (N-terminus) Antibody**  
**Catalog # ASR5675****Specification**

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**Anti-HDAC7 (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Rat, Human, Mouse
Clonality	Polyclonal
Application	WB, IHC, E, I, LCI
Application Note	Anti-HDAC7 antibody has been tested by ELISA and Western Blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~103kDa and isoforms at ~70, and 40 kDa corresponding to the appropriate cell lysate or extract.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	HDAC7 affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to the N terminal region of human HDAC7.
Preservative	0.01% (w/v) Sodium Azide

**Anti-HDAC7 (RABBIT) Antibody - Additional Information****Gene ID** 51564**Other Names**  
51564**Purity**

Anti-HDAC7 was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody is specific towards HDAC7. A BLAST analysis was used to suggest cross-reactivity with Human, Mouse, Rat and Primate based on 100% sequence homology. Cross-reactivity with HDAC7 from other sources has not been determined.

**Storage Condition**

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

**Precautions Note**

This product is for research use only and is not intended for therapeutic or diagnostic applications.

## Anti-HDAC7 (RABBIT) Antibody - Protein Information

**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:<a href="http://www.uniprot.org/citations/12239305" target="\_blank">12239305</a>). Positively regulates the transcriptional repressor activity of FOXP3 (PubMed:<a href="http://www.uniprot.org/citations/17360565" target="\_blank">17360565</a>). Serves as a corepressor of RARA, causing its deacetylation and inhibition of RARE DNA element binding (PubMed:<a href="http://www.uniprot.org/citations/28167758" target="\_blank">28167758</a>). In association with RARA, plays a role in the repression of microRNA-10a and thereby in the inflammatory response (PubMed:<a href="http://www.uniprot.org/citations/28167758" target="\_blank">28167758</a>). Also acetylates non-histone proteins, such as ALKBH5 (PubMed:<a href="http://www.uniprot.org/citations/37369679" target="\_blank">37369679</a>).

### Cellular Location

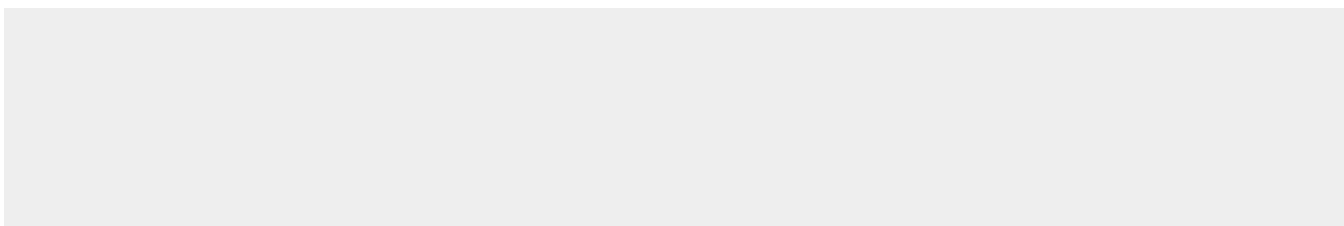
Nucleus. Cytoplasm Note=In the nucleus, it associates with distinct subnuclear dot-like structures (PubMed:11262386). Shuttles between the nucleus and the cytoplasm (PubMed:16980613). In muscle cells, it shuttles into the cytoplasm during myocyte differentiation (By similarity). The export to cytoplasm 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}

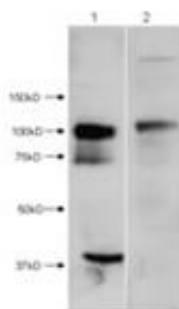
## Anti-HDAC7 (RABBIT) Antibody - Protocols

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](#)

## Anti-HDAC7 (RABBIT) Antibody - Images





Western Blot of Rabbit anti-HDAC7 antibody. Lane 1: mouse brain homogenate. Lane 2: mouse brain homogenate blocked with peptide. Load: 4  $\mu$ g per lane. Primary antibody: HDAC7 antibody at 1  $\mu$ g/mL for overnight at 4°C. Secondary antibody: HRP rabbit secondary antibody at 1:40,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: ~103kDa/ ~103, 70, and 40kDa for HDAC7. Other band(s): HDAC7 isoforms ~70 and 40kDa.

### **Anti-HDAC7 (RABBIT) Antibody - Background**

HDAC7 is a member of the class II mammalian histone deacetylases, which plays an important role in modulating the eukaryotic chromatin structure. Human HDAC7 is composed of 912 amino acid residues. Although HDAC7 is localized mostly to the cell nucleus, it is also found in the cytoplasm, suggesting nucleo-cytoplasmic shuttling. The histone deacetylase activity of HDAC7 maps to a carboxy-terminal domain and is dependent on interaction with class I HDACs in the nucleus. It is an active component of different transcriptional corepressor complexes that can be recruited to specific promoter regions via interactions with a growing number of sequence specific transcriptional factors. HDAC7 catalyzes removal of acetyl-groups from acetyl-lysines of histones and promotes compaction of chromatin in these regions, leading to the inhibition of gene transcription. Anti-HDAC7 antibodies are ideal for researches interested in Breast Cancer, Cancer, Cell Cycle and Replication, Chromatin Research, Epigenetics, and Histone Deacetylases research.