

HDAC2 Antibody (Center)

Purified Mouse Monoclonal Antibody (Mab) Catalog # AM2246b

Product Information

ApplicationWB, EPrimary AccessionQ92769ReactivityHumanHostMouseClonalityMonoclonal

Isotype IgG1

Clone Names 1194CT18.5.1 Calculated MW 55364 Antigen Region 202-488

Additional Information

Gene ID 3066

Other Names Histone deacetylase 2, HD2, HDAC2

Target/Specificity This HDAC2 antibody is generated from a mouse immunized with a

recombinant protein between 202-488 amino acids from the Central region of

human HDAC2.

Dilution WB~~1:1000 E~~Use at an assay dependent concentration.

Format Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.

This antibody is purified through a protein G column, 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 HDAC2 Antibody (Center) is for research use only and not for use in diagnostic

or therapeutic procedures.

Protein Information

Name HDAC2 {ECO:0000303 | PubMed:10545197, ECO:0000312 | HGNC:HGNC:4853}

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: 28497810). 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). Forms transcriptional repressor complexes by associating with MAD, SIN3, YY1 and N-COR (PubMed: 12724404). 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). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (PubMed: 16428440, PubMed: <u>28977666</u>). Component of the SIN3B complex that represses transcription and counteracts the histone acetyltransferase activity of EP300 through the recognition H3K27ac marks by PHF12 and the activity of the histone deacetylase HDAC2 (PubMed:37137925). Also deacetylates non-histone targets: deacetylates TSHZ3, thereby regulating its transcriptional repressor activity (PubMed:19343227). May be involved in the transcriptional repression of circadian target genes, such as PER1, mediated by CRY1 through histone deacetylation (By similarity). Involved in MTA1-mediated transcriptional corepression of TFF1 and CDKN1A (PubMed:21965678). In addition to protein deacetylase activity, also acts as a protein-lysine deacylase by recognizing other acyl groups: catalyzes removal of (2E)-butenoyl (crotonyl), lactoyl (lactyl) and 2-hydroxyisobutanoyl (2-hydroxyisobutyryl) acyl groups from lysine residues, leading to protein decrotonylation, delactylation and de-2-hydroxyisobutyrylation, respectively (PubMed: 28497810, PubMed: 29192674, PubMed: 35044827).

Cellular Location Nucleus. Cytoplasm

Tissue Location Widely expressed; lower levels in brain and lung.

Background

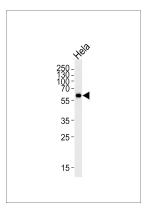
Responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events. Histone deacetylases act via the formation of large multiprotein complexes. Forms transcriptional repressor complexes by associating with MAD, SIN3, YY1 and N-COR. Interacts in the late S-phase of DNA-replication with DNMT1 in the other transcriptional repressor complex composed of DNMT1, DMAP1, PCNA, CAF1. Deacetylates TSHZ3 and regulates its transcriptional repressor 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.

References

Yang W.-M.,et al.Proc. Natl. Acad. Sci. U.S.A. 93:12845-12850(1996). Ota T.,et al.Nat. Genet. 36:40-45(2004). Mungall A.J.,et al.Nature 425:805-811(2003). Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases. Schmidt D.R.,et al.Biochemistry 38:14711-14717(1999).

Images

HDAC2 Antibody (Center) (Cat.# AM2246b) western blot analysis in Hela cell lysate (35µg/lane). This demonstrates that the HDAC2 antibody detected HDAC2 protein (arrow).



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