

HDAC1 antibody (mAb)

Catalog Nos: 39881, 39882

RRID: AB_2793378

Clone: 10E2

Isotype: IgG1

Application(s): WB

Reactivity: Human, Mouse, Rat

Quantities: 100 µg, 10 µg

Purification: Protein G Chromatography

Host: Mouse

Concentration: 1 µg/µl

Molecular Weight: 60 kDa

Background: HDAC1 (Histone Deacetylase 1, also designated HD1) is a member of the class I mammalian histone deacetylases (HDACs) involved in regulating chromatin structure during transcription. These enzymes catalyze the removal of acetyl groups from lysine residues of histones and other cellular proteins. Lysine N-ε-acetylation is a dynamic, reversible and tightly regulated protein and histone modification that plays a major role in regulation of gene expression in various cellular functions. It consists of the transfer of an acetyl moiety from an acetyl coenzyme A to the ε-amino group of a lysine residue.

In vivo, acetylation is controlled by the antagonistic activities of histone acetyltransferases (HATs) and histone deacetylases (HDACs). The HDACs are grouped into four classes, on the basis of similarity to yeast counterparts: HDAC class I (HDAC1, HDAC2, HDAC3 and HDAC8), class II (HDAC4, HDAC5, HDAC6, HDAC7, HDAC9 and HDAC10), class III (SIRT1, SIRT2, SIRT3, SIRT4, SIRT5, SIRT6 and SIRT-7) and class IV (HDAC11).

HDAC1 and HDAC2 are recruited to Mad-Max complexes, which associate with the mSin3 scaffold protein, and are required for the transcriptional repression of Mad-Max target genes. HDAC1 is also involved in the regulation of p53. HDAC1 is expressed in various tissues. HDAC1, HDAC2 and HDAC3 are also ubiquitously expressed and can deacetylate both Histone H3 and Histone H4 in free histones or nucleosome substrate.

Immunogen: This HDAC1 antibody was raised against a peptide corresponding to amino acids 467-482 of murine HDAC1.

Buffer: Purified IgG in 70 mM Tris (pH 8), 105 mM NaCl, 31 mM glycine, 0.07 mM EDTA, 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic. For your convenience, a concentrated supernatant version (Catalog No. 39531) of this antibody is also available.

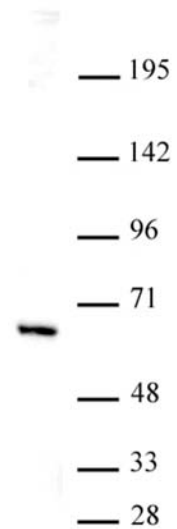
Application Notes:

Applications Validated by Active Motif:

WB*: 0.5 - 2 µg/ml dilution

*Note: many chromatin-bound proteins are not soluble in a low salt nuclear extract and fractionate to the pellet. Therefore, we recommend a High Salt / Sonication Protocol when preparing nuclear extracts for Western blot.

For ChIP-Seq analysis of HDAC1, we offer AbFlex® HDAC1 Recombinant Antibody (rAb). For details, see Catalog No. 91215.



HDAC1 antibody (mAb) tested by Western blot.

Nuclear extract of HeLa cells (20 µg per lane) probed with HDAC1 antibody at a dilution of 1 µg/ml.