HDAC1 antibody (mAb)

Catalog Nos: 39531, 39532
RRID: AB_2793245
Clone: 10E2
Isotype: IgG1
Application(s): ChIP, ICC, IF, IHC, IP, WB
Reactivity: Human, Mouse, Rat

Volumes: 100 µl, 10 µl
Purification: Culture Supernatant
Host: Mouse
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 KLH-conjugated peptide corresponding to amino acids 467-482 of human and murine HDAC1.

Buffer: Concentrated culture supernatant containing 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic. For your convenience, an IgG version (Catalog No. 39881) of this antibody that was purified by Protein A Chromatography is also available.

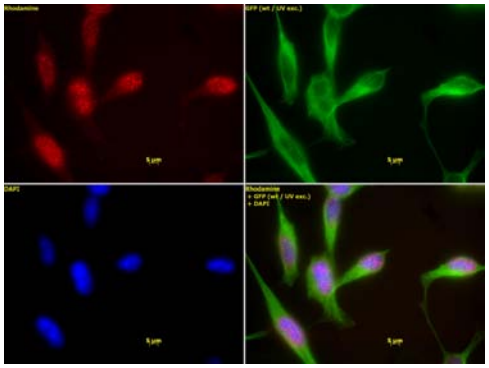
Application Notes:
Applications Validated by Active Motif:
ICC/IF: 1:500 - 1:1,000 dilution
WB*: 1:500 - 1:2,000 dilution

*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.

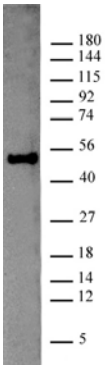
This antibody is also available as an AbFlex® engineered recombinant antibody. For details on the corresponding AbFlex Recombinant Antibody, see Catalog No. 91215.

Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



HDAC1 antibody (mAb) (Clone 10E2) tested by immunofluorescence.
Top left: HeLa cells stained with HDAC1 antibody (mAb) (Clone 10E2) (1:1,000). Top right: Same cells stained with alpha Tubulin mAb (Clone 5-B-1-2). Bottom left: Same cells stained with DAPI. Bottom right: Merge of all 3 images.



HDAC1 antibody (mAb) (Clone 10E2) tested by Western blot.
Detection of HDAC1 by Western blot analysis. Nuclear extract of HeLa cells (20 µg) was probed with HDAC1 antibody (mAb) (Clone 10E2) at a 1:500 dilution.