

HDAC2 antibody (mAb)

Catalog Nos: 39883, 39884**RRID:** AB_2793379**Clone:** 3F3**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:** 55 kDa

Background: HDAC2 (Histone Deacetylase 2, also designated mammalian RPD3) 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).

HDAC2 is associated with many different proteins as YY1 (a mammalian zinc-finger transcription factor). HDAC2 also forms transcriptional repressor complexes containing, among others, HDAC1 or RBBP4. 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 HDAC2 antibody was raised against a peptide corresponding to amino acids 473-488 of human HDAC2.

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. 39533) of this antibody is also available.

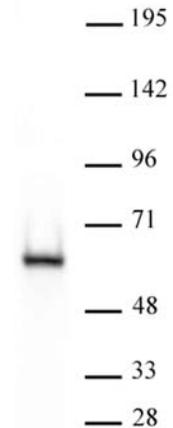
Application Notes:

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 HDAC2, we offer AbFlex® HDAC2 Recombinant Antibody (rAb). For details, see Catalog No. 91197.

**HDAC2 antibody (mAb) tested by Western blot.**

Nuclear extract of HeLa cells (20 µg per lane) probed with HDAC2 antibody at a dilution of 1 µg/ml.