HDAC2 antibody (mAb)

Catalog Nos: 39533, 39534
RRID: AB_2614959
Clone: 3F3
Isotype: IgG1
Application(s): ChIP, ICC, IF, WB
Reactivity: Human, Mouse, Rat

Volumes: 100 µl, 10 µl
Purification: Culture Supernatant
Host: Mouse
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 KLH-conjugated peptide corresponding to amino acids 473-488 of human HDAC2.

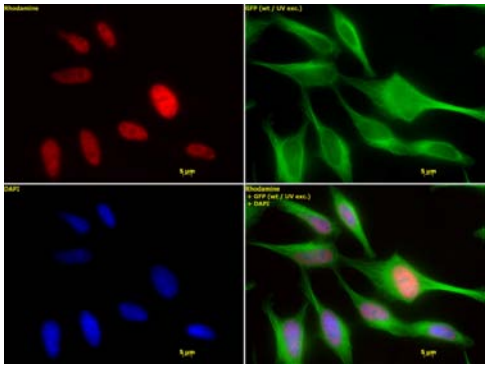
Buffer: Concentrated culture supernatant containing 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic. For your convenience, an IgG version (Catalog No. 39883) of this antibody that was purified by Protein A Chromatography is also available.

Application Notes:
Applications Validated by Active Motif:
WB*: 1:250 - 1:1,000 dilution
ICC/IF: 1:1,000 - 1:5,000 dilution

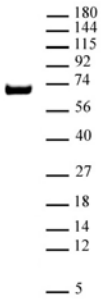
*Note: many chromatin-bound proteins are not soluble in a low salt nuclear extract and fractionate to the pellet. Therefore, we recommend a High Salt / Sonication Protocol when preparing nuclear extracts for Western Blot.

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.



HDAC2 mAb (Clone 3F3) tested by immunofluorescence.
Detection of HDAC2 by immunofluorescence. HeLa cells were stained with HDAC2 mAb (Clone 3F3) at a 1:1,000 dilution.
Red: HDAC2 mAb (Clone 3F3)
Green: alpha-Tubulin mouse monoclonal (Clone 5-B-1-2) conjugated to Chromeo™ 488.



HDAC2 mAb (Clone 3F3) tested by Western blot.
Detection of HDAC2 by Western blot. The analysis was performed using HeLa nuclear extract and HDAC2 mAb (Clone 3F3) at a 1:5,000 dilution.