

# HDAC2 (F-6): sc-55542

## BACKGROUND

In the intact cell, DNA closely associates with histones and other nuclear proteins to form chromatin. The remodeling of chromatin is believed to be a critical component of transcriptional regulation and a major source of this remodeling is brought about by the acetylation of nucleosomal histones. Acetylation of lysine residues in the amino-terminal tail domain of histones results in an allosteric change in the nucleosomal conformation and an increased accessibility to transcription factors by DNA. Conversely, the deacetylation of histones is associated with transcriptional silencing. Several mammalian proteins have been identified as nuclear histone acetylases, including GCN5, PCAF (for p300/CBP-associated factor), p300/CBP and the TFIID subunit TAF II p250. Mammalian HDAC1 (also designated HD1) and HDAC2 (also designated mammalian RPD3), both of which are related to the yeast transcriptional regulator Rpd3p, have been identified as histone deacetylases.

## REFERENCES

- Lee, D.Y., et al. 1993. A positive role for histone acetylation in transcription factor access to nucleosomal DNA. *Cell* 72: 73-82.
- Braunstein, M., et al. 1993. Transcriptional silencing in yeast is associated with reduced nucleosome acetylation. *Genes Dev.* 7: 592-604.
- Bauer, W.R., et al. 1994. Nucleosome structural changes due to acetylation. *J. Mol. Biol.* 236: 685-690.

## CHROMOSOMAL LOCATION

Genetic locus: HDAC2 (human) mapping to 6q21; Hdac2 (mouse) mapping to 10 B1.

## SOURCE

HDAC2 (F-6) is a mouse monoclonal antibody raised against amino acids 435-488 of HDAC2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

HDAC2 (F-6) is recommended for detection of HDAC2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HDAC2 siRNA (h): sc-29345, HDAC2 siRNA (m): sc-29346, HDAC2 shRNA Plasmid (h): sc-29345-SH, HDAC2 shRNA Plasmid (m): sc-29346-SH, HDAC2 shRNA (h) Lentiviral Particles: sc-29345-V and HDAC2 shRNA (m) Lentiviral Particles: sc-29346-V.

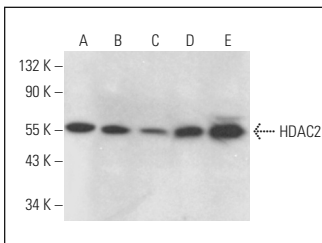
Molecular Weight of HDAC2: 59 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, MOLT-4 cell lysate: sc-2233 or Jurkat whole cell lysate: sc-2204.

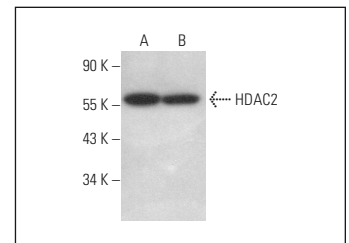
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



HDAC2 (F-6): sc-55542. Western blot analysis of HDAC2 expression in Jurkat (A), TK-1 (B), J774.A1 (C), HEL 92.1.7 (D) and AN3 CA (E) whole cell lysates.



HDAC2 (F-6): sc-55542. Western blot analysis of HDAC2 expression in CCRF-CEM whole cell lysate (A) and MOLT-4 nuclear extract (B).

## SELECT PRODUCT CITATIONS

- Engel, K., et al. 2007. *Usnea barbata* extract prevents ultraviolet-B induced prostaglandin E2 synthesis and COX-2 expression in HaCaT keratinocytes. *J. Photochem. Photobiol. B, Biol.* 89: 9-14.
- Sun, T., et al. 2015. Acetylation of Beclin 1 inhibits autophagosome maturation and promotes tumour growth. *Nat. Commun.* 6: 7215.
- Forte, M., et al. 2016. Nonylphenol effects on human prostate non tumorigenic cells. *Toxicology* 357-358: 21-32.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **HDAC2 (C-8): sc-9959** for HDAC2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.