

## HDAC1 monoclonal antibody

**Other names:** HD1, RPD3, RPD3L1, GON-10

**Cat. No. C15100144**

**Type:** Monoclonal **ChIP grade**

**Isotype:** IgG1

**Source:** Mouse

**Lot #:** 001

**Size:** 100 µl

**Concentration:** not determined

**Specificity:** Human: positive. Other species: not tested.

**Purity:** Concentrated supernatant from a mouse hybridoma cell culture containing 0.05% azide.

**Storage:** Store at -20°C; for long storage, store at -80°C. Avoid multiple freeze-thaw cycles.

**Precautions:** This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**Description:** Monoclonal antibody raised in mouse against human HDAC1 (Histone deacetylase 1), using a KLH-conjugated synthetic peptide containing a sequence from the C-terminal region of the protein.

### Applications

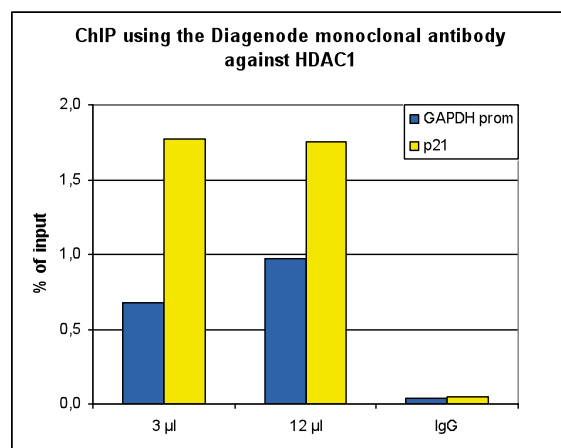
	Suggested dilution	Results
ChIP *	3 µl/ChIP	Fig 1
Western blotting	1:1,000	Fig 2, 3

\* Please note that the optimal antibody amount per IP should be determined by the end-user. We recommend testing 1-5 µg per IP.

### Target description

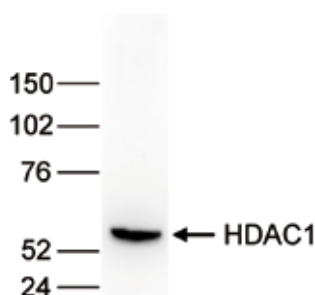
HDAC1 (UniProt/Swiss-Prot entry Q13547) catalyses the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4). Acetylation and deacetylation of these highly conserved lysine residues is important for the control of gene expression and HDAC activity is associated with gene repression. Histone deacetylation is established by the formation of large multiprotein complexes. HDAC1 also interacts with the retinoblastoma tumor suppressor protein and is able to deacetylate p53. Therefore, it plays an essential role in cell proliferation and differentiation and in apoptosis.

## Results



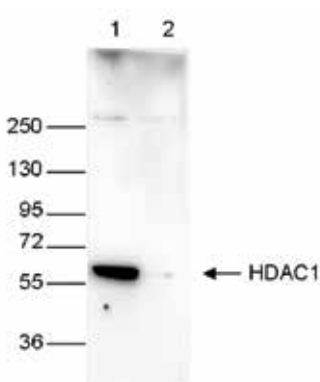
**Figure 1. ChIP results obtained with the Diagenode monoclonal antibody directed against HDAC1**

ChIP assays were performed using human HeLa cells, the Diagenode monoclonal antibody against HDAC1 (Cat. No. C15100144) and optimized PCR primer sets for qPCR. ChIP was performed with the "LowCell# ChIP" kit (Cat. No. C01010070), using sheared chromatin from 10,000 cells. Two different quantities of antibody (3 and 12 µl per ChIP experiment) were analysed. IgG (1 µg/IP) was used as negative IP control. QPCR was performed with primers for the GAPDH promoter and for the coding region of p21, a known target gene of HDAC1. Figure 1 shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).



**Figure 2. Western blot analysis using the Diagenode monoclonal antibody directed against HDAC1**

Nuclear extracts from HeLa cells (40 µg) were analysed by Western blot using the Diagenode monoclonal antibody against HDAC1 (Cat. No. C15100144) diluted 1:1,000 in TBS-Tween containing 5% skimmed milk. The position of the protein of interest is indicated on the right (expected size: 55 kDa); the marker (in kDa) is shown on the left.



**Figure 3. Western blot analysis using the Diagenode monoclonal antibody directed against HDAC1**

Whole cell extracts (40 µg) from HeLa cells transfected with HDAC1 siRNA (lane 2) and from an untransfected control (lane 1) were analysed by Western blot using the Diagenode antibody against HDAC1 (Cat. No. C15100144) diluted 1:1,000 in TBS-Tween containing 5% skimmed milk. The position of the protein of interest is indicated on the right (expected size: 55 kDa); the marker (in kDa) is shown on the left.