

HDAC3 monoclonal antibody

Other names: HD3, RPD3, RPD3-2, SMAP45

Cat. No. C15200145 (MAb-145-050)

Type: Monoclonal ChIP-grade

Isotype: IgG1

Source: Mouse

Lot #: 001

Size: 50 µg/ 25 µl

Concentration: 2 µg/µl

Specificity: Human: positive

Other species: not tested

Purity: Protein A purified monoclonal antibody in PBS containing 0.05% azide and 0.05% ProClin 300.

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 HDAC3 (Histone deacetylase 3), using a KLH-conjugated synthetic peptide containing a sequence from the C-terminal region of the protein.

Applications

	Suggested dilution	Results
ChIP *	2 µg/ChIP	Fig 1
Immunofluorescence	1:500	Fig 2

* 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

HDAC3 (UniProt/Swiss-Prot entry O15379) catalyses the deacetylation of lysine residues in 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. HDAC3 may bind to the zinc-finger transcription factor YY1, thereby regulating transcription. It is also able to modulate cell growth and apoptosis through the interaction with p53 and is thought to be essential for the repression of the POU1F1 transcription factor.

Results

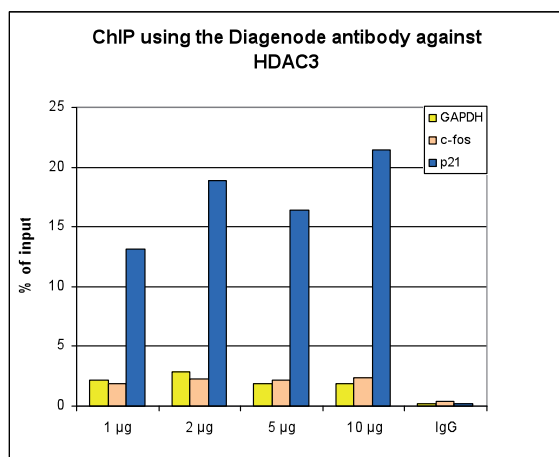


Figure 1. ChIP results obtained with the Diagenode monoclonal antibody directed against HDAC3

ChIP assays were performed using human HeLa cells, the Diagenode monoclonal antibody against HDAC3 (Cat. No. C15200145) and optimized PCR primer sets for qPCR. ChIP was performed with the "LowCell# ChIP" kit (cat. No. kch-maglow-016), on sheared chromatin from 10,000 cells using the SX-8G IP-Star automated system. A titration of the antibody consisting of 1, 2, 5, and 10 µg per ChIP experiment was analysed. IgG (5 µg/IP) was used as negative IP control. QPCR was performed with primers for the promoters of the active genes c-fos and GAPDH, and for the coding region of p21, a known target gene of HDAC3. Figure 4 shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).

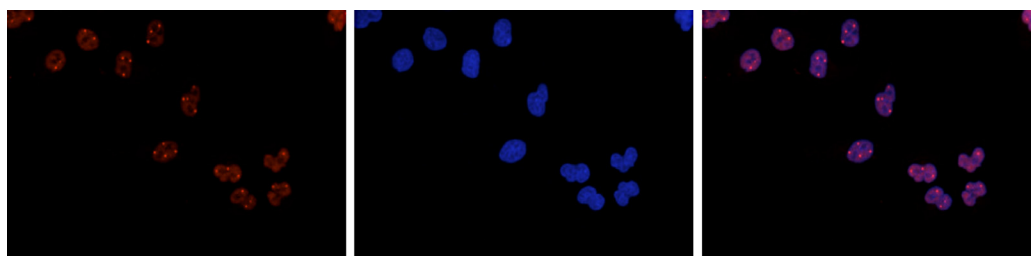


Figure 2. Immunofluorescence using the Diagenode monoclonal antibody directed against HDAC3

HeLa cells were stained with the Diagenode antibody against HDAC3 (Cat. No. C15200145) and with DAPI. Cells were fixed with 4% formaldehyde for 10' and blocked with PBS/TX-100 containing 5% normal goat serum and 1% BSA. The cells were immunofluorescently labelled with the HDAC3 antibody (left) diluted 1:500 in blocking solution followed by an anti-mouse antibody conjugated to Alexa594. The middle panel shows staining of the nuclei with DAPI. A merge of the two stainings is shown on the right.

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