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A Hologic Company

TECHNICAL DATASHEET

# HDAC3 monoclonal antibody

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

**Cat. No. C15100145** (SN-145-100)
**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 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 * | 5 µl/ChIP | Fig 1 |

* Please note that of the optimal antibody amount per IP should be determined by the end-user. We recommend testing 1-10 µl 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

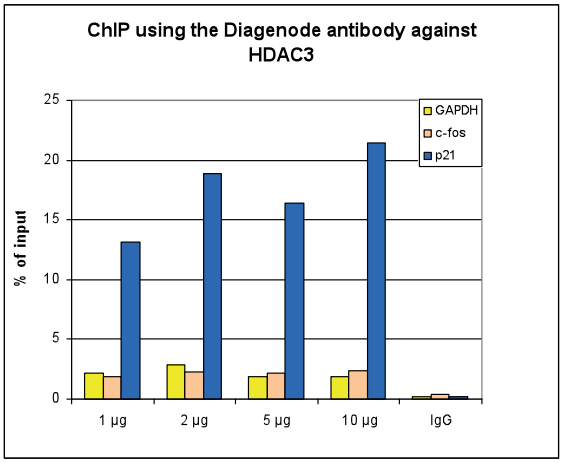


**Figure 1. ChIP results obtained with the Diagenode monoclonal antibody directed against HDAC3**

ChIP assays were performed using human HeLa cells, the Diagenode monoclonal antibody against HDAC3 (Cat. No. C15100145 ) and optimized PCR primer sets for qPCR. ChIP was performed with the "LowCell# ChIP" kit (Cat. No. C01010070), on sheared chromatin from 10,000 cells using the SX-8G IP-Star automated system. Respectively, 5 µl of the HDAC3 monoclonal antibody and 5 µg of IgG (negative IP control) were used. QPCR was performed with primers for the promoters of the active genes c-fos (cat. No. pp-1004-050) and GAPDH, and for the coding region of p21, a known target gene of HDAC3. Figure 1 shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).

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**Last update:** January 29, 2013