

# HDAC1 (human), (recombinant) (His- tag)

## Highly active

Human HDAC1 (HD1) was the first protein to be linked to histone deacetylase activity. It is homologous to the yeast protein Rpd31, a relationship which has since come to define the “class I HDACs”. HDAC1 promotes transcriptional repression by deacetylating lysine  $\epsilon$ -amino groups in histone N-terminal tails, a function frequently carried out in association with multi-protein transcription repression complexes such as NuRD3, Sin34 and CoREST6. Ubiquitously expressed in human tissues HDAC1-containing complexes appear to contribute the greater part of (at least class I) deacetylase activity in HeLa nuclear extracts. Aside from its interaction with co-repressors, HDAC1 activity may be regulated by post-translation modifications such as phosphorylation<sup>9</sup> and sumoylation or binding to the inhibitor maspin, a tumor-suppressive serpin homolog. Although originally described as a “histone deacetylase”, HDAC1 has been shown to catalyze the regulatory deacetylation of non-histone proteins, including p53. Overexpression of HDAC1 has been found in various cancer types. HDAC inhibitors (HDACi) have shown considerable promise as anti-cancer agents and HDACi compounds from multiple chemical classes are in stages of drug development ranging from preclinical to phase III trials.

Citations: 29

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## Ordering Information

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BML-SE456-0050	50µg
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## Manuals, SDS & CofA

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## Handling & Storage

<b>Use/Stability</b>	The enzyme is stable on ice for the time typically required to set up an experiment (30-60 min.), but may lose activity with prolonged storage on ice. It is recommended that thawing and dilution of the enzyme be done within as short a time as possible before start of the assay. The remaining, unused, undiluted enzyme should be refrozen quickly by, for example, snap freezing in a dry/ice ethanol bath or liquid nitrogen. Freezing and storage of diluted enzyme is not recommended.
<b>Long Term Storage</b>	-80°C
<b>Shipping</b>	Dry Ice

## Regulatory Status

RUO - Research Use Only

## Product Details

<b>Alternative Name</b>	Histone deacetylase 1
<b>Formulation</b>	Liquid. In 50mM TRIS, pH 8.0, 138mM sodium chloride and 10% glycerol.
<b>Gene/Protein Identifier</b>	NM_004964 (RefSeq)
<b>MW</b>	55 kDa
<b>Purity Detail</b>	Partially purified by single-step affinity chromatography and gel filtration.
<b>Source</b>	Produced in insect cells. HDAC1 from human cDNA (482 aa). Produced in a baculovirus expression system.
<b>Specific Activity</b>	≥5 U/μg. One U=1 pmol/min at 37°C, 100μM, FLUOR DE LYS <sup>®</sup> -SIRT1 deacetylase substrate (Prod. No. BML-K1177).
<b>UniProt ID</b>	Q13547



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