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 ε-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 phosphorylation9 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.

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Ordering Information

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BML-SE456-0050	50µg

Manuals, SDS & CofA

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Handling & Storage

Use/Stability	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.
Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	Histone deacetylase 1
Formulation	Liquid. In 50mM TRIS, pH 8.0, 138mM sodium chloride and 10% glycerol.
Gene/Protein Identifier	NM_004964 (RefSeq)
MW	55 kDa
Purity Detail	Partially purified by single-step affinity chromatography and gel filtration.
Source	Produced in insect cells. HDAC1 from human cDNA (482 aa). Produced in a baculovirus expression system.
Specific Activity	≥5 U/µg. One U=1 pmol/min at 37°C, 100µM, FLUOR DE LYS®-SIRT1 deacetylase substrate (Prod. No. BML-KI177).
UniProt ID	Q13547

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