Recombinant Human HDAC1, His-tagged

Cat. No. HDAC1-1339H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human HDAC1 fussed with His tag was expressed in insect cells.
Species	Human
Source	Insect Cells
ProteinLength	1-482 aa
Description	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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Form	Liquid. In 50mM TRIS, pH 8.0, 138mM sodium chloride and 10% glycerol.
Molecular Mass	55 kDa
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.
Storage	Long Term Storage: -80°C

GENE INFORMATION

Gene Name	HDAC1 histone deacetylase 1 [Homo sapiens]
Official Symbol	HDAC1
Synonyms	HD1; RPD3; GON-10; RPD3L1; histone deacetylase 1; reduced potassium dependency, yeast homolog-like 1
Gene ID	3065
mRNA Refseq	NM004964
Protein Refseq	NP_004955
MIM	601241
UniProt ID	Q13547

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Chromosome Location	1p34
Pathway	Alcoholism, organism-specific biosystem; Amphetamine addiction, organism-specific biosystem; Androgen receptor signaling pathway, organism-specific biosystem
Function	NAD-dependent histone deacetylase activity (H3-K14 specific); NAD-dependent histone deacetylase activity (H4-K16 specific); NF-kappaB binding

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