

## HDAC1 Protein, Human, Recombinant (His &amp; SUMO)

## General Information

Synonyms:	Protein deacylase HDAC1;HDAC1;HD1;Histone deacetylase 1;RPD3L1;Protein deacetylase HDAC1
Protein Construction:	1-482 aa
Species:	Human
Expression Host:	E. coli
Accession:	Q13547
Molecular Weight:	71.1 kDa (predicted)
AA Sequence:	MAQTQGTRRKVCYYYDGDVGNYYYYGQGHMPKPHRIRMTNLLLNYGLYRKMEIYRPHKANAEEMTKYHSD DYIKFLRSIRPDNMSEYSKQMQRFNVEDCPVFDGLFEFCQLSTGGSVASAVKLNKQQTDAVNWAGGLHH AKKSEASGFCYVNDIVLAILELLKYHQRVLYIDIDIHHGDGVVEAFYTTDRVMTVSFHKYGEYFPGTGDLRDIGA GKGKYYAVNYPLRDGIDDESIEAIFKPVMSKVMEMFQPSAVVLQCGSDSLSGDRLGCFNLTIKGHAKCVEFV KSFNLPMLMLGGGGYTIRNVARCWYETAVALDTEIPNELPYNDYFEYFGPDFKLHISPSNMTNQNTNEYLEK IKQRLFENLRMLPHAPGVQMQAIPEDAIPESGDEDEDPPDKRISICSSDKRIACEEEFSDSEEEGEGGRKNSS NFKKAKRVKTEDEKEKDPEEKKEVTEEEKTKEEKPEAKGVKEEVKLA

## QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

## Preparation and Storage

## Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

## Stability &amp; Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

*Actual storage temperature shall be subject to the COA.*

## Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

## Protein Background

## A DRUG SCREENING EXPERT

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Responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events. Histone deacetylases act via the formation of large multiprotein complexes. Deacetylates SP proteins, SP1 and SP3, and regulates their function. Component of the BRG1-RB1-HDAC1 complex, which negatively regulates the CREB-mediated transcription in resting neurons. Upon calcium stimulation, HDAC1 is released from the complex and CREBBP is recruited, which facilitates transcriptional activation. Deacetylates TSHZ3 and regulates its transcriptional repressor activity. Deacetylates 'Lys-310' in RELA and thereby inhibits the transcriptional activity of NF-kappa-B. Deacetylates NR1D2 and abrogates the effect of KAT5-mediated relieving of NR1D2 transcription repression activity. Component of a RCOR/GFI/KDM1A/HDAC complex that suppresses, via histone deacetylase (HDAC) recruitment, a number of genes implicated in multilineage blood cell development. Involved in CIART-mediated transcriptional repression of the circadian transcriptional activator: CLOCK-ARNTL/BMAL1 heterodimer. Required for the transcriptional repression of circadian target genes, such as PER1, mediated by the large PER complex or CRY1 through histone deacetylation.

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