

Histone deacetylase 1/HDAC1 Protein, Human (His-SUMO)

Cat. No.:	HY-P72262
Synonyms:	GON 10; HD1; HDAC1; RPD3; RPD3L1
Species:	Human
Source:	E. coli
Accession:	Q13547 (M1-A482)
Gene ID:	3065
Molecular Weight:	71-74 kDa

PROPERTIES

AA Sequence	MAQTQGTRRK VCYYYDGDVG NYYYGQGHPM KPHRIRMTHN LLLNLYGLYRK MEIYRPHKAN AEEMTKYHSD DYIKFLRSIR PDNMSEYSKQ MQRFNVGEDC PVFDGLFEFC QLSTGGSVAS AVKLNKQQT D IAVNWAGGLH HAKKSEASGF CYVNDIVLAI LELLKYHQRV LYIDIDIHHG DGVEEAFYTT DRVMTVSFHK YGEYFPGTGD LRDIGAGKGK YYAVNYPLRD GIDDESIEAI FKPVMASKVME MFQPSAVVLQ CGSDSLSGDR LGCFNLTIKG HAKCVEFVKS FNLPLMLLGG GGYTIRNVAR CWTYETAVAL DTEIPNELPY NDYFEYFGPD FKLHISPSNM TNQNTNEYLE KIKQRLFENL RMLPHAPGVQ MQAIPEDAIP EESGDEDEDD PDKRISICSS DKRIACEEEF SDSEEEGEGG RKNSSNFKKA KRVKTEDEKE KDPEEKKEVT EEEKTKEEKP EAKGVKEEVK LA
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder
Formulation	Lyophilized from 0.2 µm filtered solution in 10 mM Tris-HCl, 1 mM EDTA, 6% Trehalose, pH 8.0 or PBS, 6% Trehalose, pH 7.4 or 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

Histone deacetylase 1 (HDAC1) Protein serves as a pivotal enzyme that catalyzes the deacetylation of lysine residues located on the N-terminal regions of core histones, including H2A, H2B, H3, and H4. This deacetylation process contributes to the establishment of an epigenetic repression tag and plays crucial roles in transcriptional regulation, cell cycle progression, and developmental events. Functioning within large multiprotein complexes, HDAC1 is a component of the histone deacetylase NuRD complex, actively participating in chromatin remodeling. Beyond histones, HDAC1 exhibits deacetylase activity toward non-histone targets, including NR1D2, RELA, SP1, SP3, and TSHZ3. This versatile enzyme regulates the function of SP proteins (SP1 and SP3) through deacetylation, and it forms part of the BRG1-RB1-HDAC1 complex, which negatively regulates CREST-mediated transcription in resting neurons. Furthermore, HDAC1 acts as a protein decrotonylase, mediating the decrotonylation of histones, thereby expanding its enzymatic repertoire. The multifaceted activities of HDAC1 underscore its central role in epigenetic regulation and diverse cellular processes.

Caution: Product has not been fully validated for medical applications. For research use only.

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