

Histone deacetylase 1 Recombinant Protein | HDAC1 recombinant protein

Recombinant Human Histone deacetylase 1

CATALOG # AAA18782	HOST E Coli or Yeast or Baculovirus or Mammalian Cell
------------------------------	---

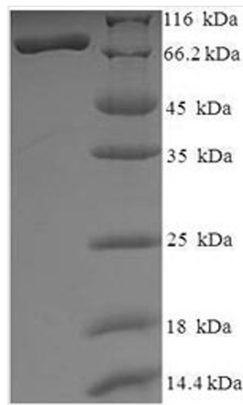
PRODUCT SYNONYMS

Histone deacetylase 1; Recombinant Human Histone deacetylase 1; HDAC1 recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE.
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Sequence Positions	1-482aa; Full Length
Sequence	MAQTQGTRRK VCYYYDGDVG NYYYQGQHPM KPHRIRMTHN LLLNYGLYRK MEIYRPHKAN AEEMTKYHSD DYIKFLRSIR PDNMSEYSKQ MQRFNVGEDC PVFDGLFEFC QLSTGGSVAS AVKLNKQQT D IAVNWAGGLH HAKKSEASGF CYVNDIVLAI LELLKYHQRV LYIDIDIHHG DGVEEAFYTT DRVMTVSFHK YGEYFPGTGD LRDIGAGKGK YYAVNYPLRD GIDDESIEAI FKPVMSKVME MFQPSAVVLQ CGSDSLSGDR LGCNLTIKG HAKCVEFVKS FNLPMMLGG GGYTIRNVAR CWTYETAVAL DTEIPNELPY NDYFEYFGPD FKLHISPSNM TNQNTNEYLE KIKQRLFENL RMLPHAPGVQ MQAIPEDAIP EESGDEDEDD PDKRISICSS DKRIACEEEF SDSEEEGEGG RKNSSNFKKA KRVKTEDEKE KDPEEKKEVT EEEKTKEEKP EAKGVKEEVK LA
Preparation and Storage	Store at -20 degree C, for extended storage, conserve at -20 degree C or -80 degree C.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for HDAC1 recombinant protein	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 CREST-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
Product Categories/Family for HDAC1 recombinant protein	Immunology

References

A mammalian histone deacetylase related to the yeast transcriptional regulator Rpd3p. Taunton J., Hassig C.A., Schreiber S.L. *Science* 272:408-411(1996) Isolation and mapping of a human gene (RPD3L1) that is homologous to RPD3, a transcription factor in *Saccharomyces cerevisiae*. Furukawa Y., Kawakami T., Sudo K., Inazawa J., Matsumine A., Akiyama T., Nakamura Y. *Cytogenet. Cell Genet.* 73:130-133(1996) MEF-2 function is modified by a novel co-repressor, MITR. Sparrow D.B., Miska E.A., Langley E., Reynaud-Deonauth S., Kotecha S., Towers N., Spohr G., Kouzarides T., Mohun T.J. *EMBO J.* 18:5085-5098(1999) BCoR, a novel corepressor involved in BCL-6 repression. Huynh K.D., Fischle W., Verdin E., Bardwell V.J. *Genes Dev.* 14:1810-1823(2000) HDAC1, a histone deacetylase, forms a complex with Hus1 and Rad9, two G2/M checkpoint Rad proteins. Cai R.L., Yan-Neale Y., Cueto M.A., Xu H., Cohen D.J. *Biol. Chem.* 275:27909-27916(2000) Receptor-interacting protein 140 directly recruits histone deacetylases for gene silencing. Wei L.-N., Hu X., Chandra D., Seto E., Farooqui M.J. *Biol. Chem.* 275:40782-40787(2000) Sequestration and inhibition of Daxx-mediated transcriptional repression by PML. Li H., Leo C., Zhu J., Wu X., O'Neil J., Park E.-J., Chen J.D. *Mol. Cell. Biol.* 20:1784-1796(2000) Identification of a transcriptional repressor related to the noncatalytic domain of histone deacetylases 4 and 5. Zhou X., Richon V.M., Rifkind R.A., Marks P.A. *Proc. Natl. Acad. Sci. U.S.A.* 97:1056-1061(2000) Histone deacetylase 1 phosphorylation promotes enzymatic activity and complex formation. Pflum M.K.H., Tong J.K., Lane W.S., Schreiber S.L.J. *Biol. Chem.* 276:47733-47741(2001) Sharp, an inducible cofactor that integrates nuclear receptor repression and activation. Shi Y., Downes M., Xie W., Kao H.-Y., Ordentlich P., Tsai C.-C., Hon M., Evans R.M. *Genes Dev.* 15:1140-1151(2001) Stable histone deacetylase complexes distinguished by the presence of SANT domain proteins CoREST/kiaa0071 and Mta-L1. Humphrey G.W., Wang Y., Russanova V.R., Hirai T., Qin J., Nakatani Y., Howard B.H.J. *Biol. Chem.* 276:6817-6824(2001) TGIF2 interacts with histone deacetylase 1 and represses transcription. Melhuish T.A., Gallo C.M., Wotton D.J. *Biol. Chem.* 276:32109-32114(2001) ETO, a target of t(8;21) in acute leukemia, makes distinct contacts with multiple histone deacetylases and binds mSin3A through its oligomerization domain. Amann J.M., Nip J., Strom D.K., Lutterbach B., Harada H., Lenny N., Downing J.R., Meyers S., Hiebert S.W. *Mol. Cell. Biol.* 21:6470-6483(2001) The SUMO E3 ligase RanBP2 promotes modification of the HDAC4 deacetylase. Kirsh O., Seeler J.-S., Pichler A., Gast A., Mueller S., Miska E., Mathieu M., Harel-Bellan A., Kouzarides T., Melchior F., Dejean A. *EMBO J.* 21:2682-2691(2002) SUMO-1 modification of histone deacetylase 1 (HDAC1) modulates its biological activities. David G., Neptune M.A., DePinho R.A.J. *Biol. Chem.* 277:23658-23663(2002) Role of acetylated human AP-endonuclease (APE1/Ref-1) in regulation of the parathyroid hormone gene. Bhakat K.K., Izumi T., Yang S.H., Hazra T.K., Mitra S. *EMBO J.* 22:6299-6309(2003) Human Sin3 deacetylase and trithorax-related Set1/Ash2 histone H3-K4 methyltransferase are tethered together selectively by the cell-proliferation factor HCF-1. Wysocka J., Myers M.P., Laherty C.D., Eisenman R.N., Herr W. *Genes Dev.* 17:896-911(2003) A candidate X-linked mental retardation gene is a component of a new family of histone deacetylase-containing complexes. Hakimi M.-A., Dong Y., Lane W.S., Speicher D.W., Shiekhhattar R.J. *Biol. Chem.* 278:7234-7239(2003) Acetylated SP3 is a transcriptional activator. Ammanamanchi S., Freeman J.W., Brattain M.G.J. *Biol. Chem.* 278:35775-35780(2003) Human MI-ER1 alpha and beta function as transcriptional repressors by recruitment of histone deacetylase 1 to their conserved ELM2 domain. Ding Z., Gillespie L.L., Paterno G.D. *Mol. Cell. Biol.* 23:250-258(2003) Identification and characterization of three new components of the mSin3A corepressor complex. Fleischer T.C., Yun U.J., Ayer D.E. *Mol. Cell. Biol.* 23:3456-3467(2003) Modulation of p120E4F transcriptional activity by the Gam1 adenoviral early protein. Colombo R., Draetta G.F., Chiocca S. *Oncogene* 22:2541-2547(2003) Identification of a novel BRMS1-homologue protein p40 as a component of the mSin3A/p33(ING1b)/HDAC1 deacetylase complex. Nikolaev A.Y., Papanikolaou N.A., Li M., Qin J., Gu W. *Biochem. Biophys. Res. Commun.* 323:1216-1222(2004) MTA3 and the Mi-2/NuRD complex regulate cell fate during B lymphocyte differentiation. Fujita N., Jaye D.L., Geigerman C., Akyildiz A., Mooney M.R., Boss J.M., Wade P.A. *Cell* 119:75-86(2004) Site-specific acetylation of the fetal globin activator NF-E4 prevents its ubiquitination and regulates its interaction with the histone deacetylase, HDAC1. Zhao Q., Cumming H., Cerruti L., Cunningham J.M., Jane S.M.J. *Biol. Chem.* 279:41477-41486(2004) SENP1 enhances androgen receptor-dependent transcription through desumoylation of histone deacetylase 1. Cheng J., Wang D., Wang Z., Yeh E.T.H. *Mol. Cell. Biol.* 24:6021-6028(2004) ICBP90, an E2F-1 target, recruits HDAC1 and binds to methyl-CpG through its SRA domain. Unoki M., Nishidate T., Nakamura Y. *Oncogene* 23:7601-7610(2004) NuRD and SIN3 histone deacetylase complexes in development. Ahringer J. *Trends Genet.* 16:351-356(2000) Functional characterization of JMJD2A, a histone deacetylase- and retinoblastoma-binding protein. Gray S.G., Iglesias A.H., Lizcano F., Villanueva R., Camelo S., Jingu H., Teh B.T., Koibuchi N., Chin W.W., Kokkotou E., Dangond F.J. *Biol. Chem.* 280:28507-28518(2005) Tumor suppressor SMAR1 mediates cyclin D1 repression by recruitment of the SIN3/histone deacetylase 1 complex. Rampalli S., Pavithra L., Bhatt A., Kundu T.K., Chattopadhyay S. *Mol. Cell. Biol.* 25:8415-8429(2005) INSM1 functions as a transcriptional repressor of the neuroD/beta2 gene through the recruitment of cyclin D1 and histone deacetylases. Liu W.D., Wang H.W., Muguiru M., Breslin M.B., Lan M.S. *Biochem. J.* 397:169-177(2006) Global, in vivo, and site-specific phosphorylation dynamics in signaling networks. Olsen J.V., Blagoev B., Gnani F., Macek B., Kumar C., Mortensen P., Mann M. *Cell* 127:635-648(2006) Sp1 deacetylation induced by phorbol ester recruits p300 to activate 12(S)-lipoxygenase gene transcription. Hung J.J., Wang Y.T., Chang W.C. *Mol. Cell. Biol.* 26:1770-1785(2006) Breast cancer metastasis suppressor 1 functions as a corepressor by enhancing histone deacetylase 1-mediated deacetylation of RelA/p65 and promoting apoptosis. Liu Y., Smith P.W., Jones D.R. *Mol. Cell. Biol.* 26:8683-8696(2006) SAP30L interacts with members of the Sin3A corepressor complex and targets Sin3A to the nucleolus. Viiri K.M., Korkeamaeki H., Kukkonen M.K., Nieminen L.K., Lindfors K., Peterson P., Maeki M., Kainulainen H., Lohi O. *Nucleic Acids Res.* 34:3288-3298(2006) Toward a global characterization of the phosphoproteome in prostate cancer cells: identification of phosphoproteins in the LNCaP cell line. Giorgianni F., Zhao Y., Desiderio D.M., Beranova-Giorgianni S. *Electrophoresis* 28:2027-2034(2007) Mechanisms of ceramide-mediated repression of the human telomerase reverse transcriptase promoter via deacetylation of Sp3 by histone deacetylase 1. Wooten-Blanks L.G., Song P., Senkal C.E., Ogretmen B. *FASEB J.* 21:3386-3397(2007) Breast cancer associated transcriptional repressor PLU-1/JARID1B interacts directly with histone deacetylases. Barrett A.,

NCBI AND UNIPROT INFORMATION

NCBI GI #	13128860
NCBI GeneID	3065
NCBI Accession #	NP_004955.2
NCBI GenBank Nucleotide #	NM_004964.2
UniProt Accession #	Q13547; Q92534
Molecular Weight	71.1 kDa
NCBI Official Full Name	histone deacetylase 1
NCBI Official Synonym Full Names	histone deacetylase 1
NCBI Official Symbol	HDAC1
NCBI Official Synonym Symbols	HD1; RPD3; GON-10; RPD3L1
NCBI Protein Information	histone deacetylase 1
UniProt Protein Name	Histone deacetylase 1
UniProt Gene Name	HDAC1
UniProt Synonym Gene Names	RPD3L1; HD1
UniProt Entry Name	HDAC1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/hdac1-recombinant-protein-e-coli-or-yeast-or-baculovirus-or-mammalian-cell/18782>