HDAC8 Recombinant Protein

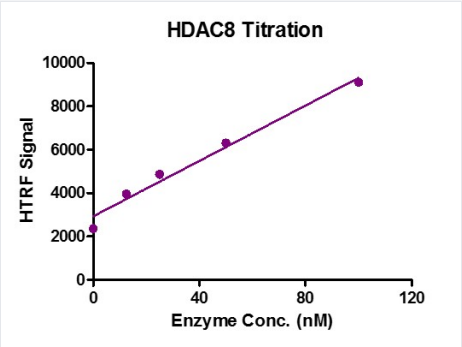
PRODUCT OVERVIEW

Product Name	HDAC8, Recombinant Protein
Full Product Name	Recombinant HDAC8 protein, His-Tag
Product Gene Name	HDAC8 recombinant protein
Product Synonym Names	Histone Deacetylase 8; HDACL1; HD8; CDA07; CDLS5; MRXS6; RPD3
Host	Baculovirus
Form/Format	Recombinant full length HDAC8 protein, His-Tag is supplied in 25mM Tris pH8.0, 300mM NaCl, 20% glycerol.
Purity/Purification	The HDAC8 protein, His-Tag is >90% pure by SDS-PAGE.
Preparation and Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 degree C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. Shipping Temp: Dry Ice
Molecular Weight	31,935 Da
OMIM	phenotype 309585
3D Structure	ModBase 3D Structure for Q9BY41
Protein Species	Human
Tag	His-Tag
Notes	This protein is useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling. HDAC Activity Assay Conditions: 3uM Histone H3K9ac (1-21 aa) peptide was incubated with HDAC8 protein in reaction buffer including 25mM Tris-HCl pH 8.0, 137mM NaCl, 2.7mM MgCl2, 1mM KCl and 0.1mg/ml BSA for 30 min at 37 degree C. HTRF assay was used for activity detection.
Dry Ice Shipment	Extra charge fee may add to your shipping cost as dry ice is required to ship this product.
Product Categories/Family for HDAC8 recombinant protein	Recombinant Proteins; Histone Deacetylase (HDAC)
Related Product Information for HDAC8 recombinant protein	Short Description: Recombinant human HDAC8 protein, His-Tag was expressed in a baculovirus expression system as the full-length protein (accession number NP_060956.1) with a C-terminal 6xHis-tag. The molecular weight of the protein is 43.8 kDa. The HDAC8 protein, His-Tag is >90% pure by SDS-PAGE. It is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling. Background: HDAC8 (Histone Deacetylase 8) is a member of the class I mammalian histone deacetylases (HDACs) involved in regulating chromatin structure during transcription. These enzymes catalyze the removal of acetyl groups from lysine residues of histones and other cellular proteins. Lysine N-epsilon-acetylation is a dynamic, reversible and tightly regulated protein and histone modification that plays a major role in regulation of gene expression in various cellular functions. It consists of the transfer of an acetyl moiety from an acetyl coenzyme A to the e-amino group of a lysine residue. In vivo, acetylation is controlled by the antagonistic activities of histone acetyltransferases (HATs) and histone deacetylases (HDACs). The HDACs are grouped into four classes, on the basis of similarity to yeast counterparts: HDAC class I (HDAC1, HDAC2, HDAC3 and HDAC8), class II (HDAC4, HDAC5, HDAC6, HDAC7, 9 and 10), class III (SIRT1-7) and class IV (HDAC11). HDAC8 catalyzes the deacetylation of lysine residues in the histone N-terminal tails and represses transcription in large multiprotein complexes with transcriptional co-repressors. It also is involved in the deacetylation of cohesin complex protein SMC3 regulating release of cohesin complexes from chromatin. HDAC8 may play a role in smooth muscle cell contractility.

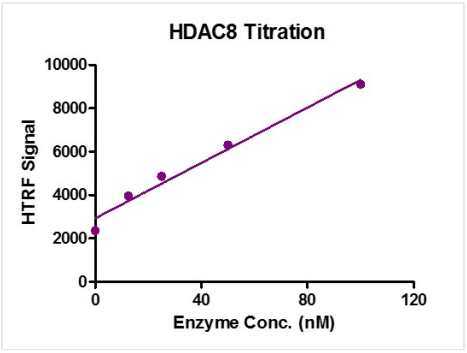
Other Notes	Small volumes of HDAC8 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for HDAC8 purchase	MBS388269 is a recombinant protein targeting HDAC8. Also known as Recombinant HDAC8 protein, His-Tag. Host: Baculovirus.



SDS-Page of HDAC8 recombinant protein
Recombinant HDAC8 His-Tag protein gel. HDAC8 protein was run on an 8% SDS-PAGE gel and stained with Coomassie Blue.



Testing Data of HDAC8 recombinant protein
HTRF assay for HDAC8 protein, His-Tag 3 uM Histone H3K9ac (1-21aa) peptide was incubated with HDAC8 protein, His-Tag in reaction buffer for 30 min at 37 degree C, Reaction product was detected by Anti-H3K9me0-Eu antibody. HTRF assay was used for activity detection.



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ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HDAC8. It may not necessarily be applicable to this product.

NCBI GI #	8923769
NCBI GeneID	55869
NCBI Accession #	NP_060956.1
UniProt Primary Accession #	Q9BY41
UniProt Secondary Accession #	Q86VC8; Q9NP76; Q9NYH4; A6ND12; A6ND61; A6NET3; A6NJR3; A8MQ62; B4DKN0; B4DV22
UniProt Related Accession #	Q9BY41
GenBank Nucleotide #	NM_018486.2
NCBI Official Full Name	histone deacetylase 8 isoform 1
NCBI Official Synonym Full Names	histone deacetylase 8
NCBI Official Symbol	HDAC8

NCBI Official Synonym Symbols	HD8; WTS; RPD3; CDA07; CDLS5; MRXS6; HDACL1
UniProt Protein Name	Histone deacetylase 8
UniProt Gene Name	HDAC8
UniProt Synonym Gene Names	HDACL1; HD8
UniProt Entry Name	HDAC8_HUMAN
NCBI Protein Information	histone deacetylase 8
NCBI Summary for HDAC8	Histones play a critical role in transcriptional regulation, cell cycle progression, and developmental events. Histone acetylation/deacetylation alters chromosome structure and affects transcription factor access to DNA. The protein encoded by this gene belongs to class I of the histone deacetylase family. It catalyzes the deacetylation of lysine residues in the histone N-terminal tails and represses transcription in large multiprotein complexes with transcriptional co-repressors. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Oct 2009]
UniProt Comments for HDAC8	HDAC8: 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. May play a role in smooth muscle cell contractility. Belongs to the histone deacetylase family. HD type 1 subfamily. 5 isoforms of the human protein are produced by alternative splicing. Protein type: EC 3.5.1.98; Hydrolase Chromosomal Location of Human Ortholog: Xq13 Cellular Component: nucleoplasm; nuclear chromosome; histone deacetylase complex; cytoplasm; plasma membrane; cytosol; nucleus Molecular Function: NAD-dependent histone deacetylase activity (H3-K9 specific); NAD-dependent histone deacetylase activity (H3-K14 specific); metal ion binding; NAD-dependent histone deacetylase activity (H4-K16 specific); histone deacetylase activity; transcription factor binding Biological Process: chromatin assembly or disassembly; establishment and/or maintenance of chromatin architecture; transcription, DNA-dependent; sister chromatid cohesion; mitotic cell cycle; chromatin modification; negative regulation of transcription from RNA polymerase II promoter Disease: Wilson-turner X-linked Mental Retardation Syndrome
Research Articles on HDAC8	**1.** we report a de novo missense HDAC8 mutation that causes overlapping features of Rett-related disorder and Cornelia de Lange syndrome. It is possible that this HDAC8 mutation may be harmful via MECP recruitment, and may consequently cause Rett-related disorder
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