

## Recombinant Human HDAC3, His-tagged

**Cat. No.** HDAC3-8482H    **Lot. No.** (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Human HDAC3, fused with His tag, was expressed in Sf21 Cells.
<b>Species</b>	Human
<b>Source</b>	Sf21 Cells
<b>Description</b>	<p>The nucleosomal histones can be modified through reversible acetylation by histone acetyltransferases (HATs) and deacetylases (HDACs). Acetylation and deacetylation of histone proteins alters chromosome structure and affects transcription factor access to DNA. HDAC3 has an open reading frame of 428 amino acids. HDAC3 shares 53% amino acid identity with HDAC1 and 52% with HDAC2. Observations indicate that class II HDACs regulate transcription by bridging the enzymatically active NCOR2-HDAC3 complex and select transcription factors. All HDACs were found to be ubiquitously expressed in immune and non-immune tissues. In human myeloid leukemia THP-1 cells, HDAC3 transfection resulted in increased size, aberrant nuclear morphology and cell cycle G2/M cell accumulation. Functional activity of the expressed HDAC3 protein was confirmed in alpha-HDAC3 antibody immunoprecipitates by a histone deacetylase assay. Study suggests the participation of HDACs in cell cycle progression and activation.</p>
<b>Form</b>	20 mM Tris-Cl, pH 7.9, 20% Glycerol, 100 mM KCl, 1 mM DTT and 0.2 mM EDTA
<b>AA Sequence</b>	MAKTVAYFYD PDVGNFHYGA GHPMKPHRLA LTHSLVLHYG LYKKMIVFKP YQASQHDMCR FHSEDYIDFL QRVSPNTMQG FTKSLNAFNV GDDCPVFPGL

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

FEFCSRYTGA SLQGATQLNN KICDIANWA GGLHHAKKFE ASGFCYVNDI  
 VIGILELLKY HPRVLYIDID IHHGDGVQEA FYLTDRVMTV SFHKYGNYYF  
 PGTGDMYEVG AESGRYYCLN VPLRDGIDDQ SYKHLFQPVI NQVVDFYQPT  
 CIVLQCGADS LGCDRLGCFN LSIRGHGECV EYVKSFNIPL LVLGGGGYTV  
 RNVARCWTYE TSLLVEEAIS EELPYSEYFE YFAPDFTLHP DVSTRIENQN  
 SRQYLDQILQ TIFENLKMLN HAPSVQIHDV PADLLTYDRT DEADAEERGP  
 EENYSRPEAP NEFYDGDHDN DKESDVEI

**Purity** >95% as determined by SDS-PAGE

**Storage** -80 °C

**Concentration** 300 µg/ml

**Shipping** Dry Ice

## GENE INFORMATION

**Gene Name** HDAC3 histone deacetylase 3 [ Homo sapiens ]

**Official Symbol** HDAC3

**Synonyms** HDAC3; histone deacetylase 3; HD3; RPD3; RPD3 2; SMAP45; RPD3-2;

**Gene ID** 8841

**mRNA Refseq** NM\_003883

**Protein Refseq** NP\_003874

**MIM** 605166

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<b>UniProt ID</b>	O15379
<b>Chromosome Location</b>	5q31.1-q31.2
<b>Pathway</b>	BMAL1:CLOCK/NPAS2 Activates Circadian Expression, organism-specific biosystem; Cell cycle, organism-specific biosystem; Circadian Clock, organism-specific biosystem; Circadian Repression of Expression by REV-ERBA, organism-specific biosystem; Developmental Biology, organism-specific biosystem; Fatty acid, triacylglycerol, and ketone body metabolism, organism-specific biosystem; Metabolism, organism-specific biosystem;
<b>Function</b>	DNA binding; NAD-dependent histone deacetylase activity (H3-K14 specific); NAD-dependent histone deacetylase activity (H3-K9 specific); NAD-dependent histone deacetylase activity (H4-K16 specific); chromatin binding; enzyme binding; histone deacetylase activity; histone deacetylase activity; histone deacetylase activity (H3-K16 specific); histone deacetylase binding; hydrolase activity; protein binding; protein deacetylase activity; transcription corepressor activity; transcription factor binding;

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