Recombinant Human HDAC3, His-tagged

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

SPECIFICATION

Product Overview	Recombinant Human HDAC3, fused with His tag, was expressed in Sf21 Cells.
Species	Human
Source	Sf21 Cells
Description	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.
Form	20 mM Tris-Cl, pH 7.9, 20% Glycerol, 100 mM KCl, 1 mM DTT and 0.2 mM EDTA
AA Sequence	MAKTVAYFYD PDVGNFHYGA GHPMKPHRLA LTHSLVLHYG LYKKMIVFKP YQASQHDMCR FHSEDYIDFL QRVSPTNMQG FTKSLNAFNV GDDCPVFPGL

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	FEFCSRYTGA SLQGATQLNN KICDIAINWA GGLHHAKKFE ASGFCYVNDI VIGILELLKY HPRVLYIDID IHHGDGVQEA FYLTDRVMTV SFHKYGNYFF 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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UniProt ID	O15379
Chromosome Location	5q31.1-q31.2
Pathway	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;
Function	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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