

Product datasheet for **RC201745**

HDAC1 (NM_004964) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HDAC1 (NM_004964) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HDAC1
Synonyms:	GON-10; HD1; KDAC1; RPD3; RPD3L1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC201745 representing NM_004964
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGCAGACGCAGGGCACCCGGAGGAAAGTCTGTTACTACTACGACGGGGATGTTGAAATTA
 ATGGACAAGGCCACCAATGAAGCCTCACGAATCCGCATGACTCATAATTTGCTGCTCAACTATGGTCT
 CTACCGAAAAATGAAATCTATCGCCCTCACAAAGCCAATGCTGAGGAGATGACCAAGTACCACAGCGAT
 GACTACATTAATTTCTTGCCTCCATCCGTCAGATAACATGTCGGAGTACAGCAAGCAGATGCAGAGAT
 TCAACGTTGGTGGAGACTGTCCAGTATTCGATGGCCTGTTGAGTTCTGTGAGTTGTCTACTGGTGGTTC
 TGTGGCAAGTGTGAAACTTAATAAGCAGCAGACGGACATCGCTGTGAATTGGGCTGGGGCCTGCAC
 CATGCAAAGAAGTCCGAGGCATCTGGCTTCTGTTACGTCATGATATCGTCTTGGCCATCCTGGAAGTGC
 TAAAGTATCACCAGAGGGTGTGTACATTGACATTGATATCACCATGGTACGGCGTGAAGAGGCCTT
 CTACACCAGGACCGGGTATGACTGTGTCTTTTATAAGTATGGAGAGTACTTCCAGGAACTGGGGAC
 CTACGGGATATCGGGGCTGGCAAAGCAAGTATTATGCTGTTAACTACCCGCTCCGAGACGGGATTGATG
 ACGAGTCTATGAGGCCATTTTCAAGCCGGTATGTCCAAAGTAAATGGAGATGTTCCAGCCTAGTGCGGT
 GGTCTTACAGTGTGGCTCAGACTCCCTATCTGGGGATCGGTTAGGTTGCTTCAATCTAACTATCAAAGGA
 CACGCCAAGTGTGGAATTTGTCAAGAGCTTTAACCTGCCTATGCTGATGCTGGGAGGCGGTGGTTACA
 CCATTCGTAACGTTGCCCGGTGCTGGACATATGAGACAGCTGTGGCCCTGGATACGGAGATCCCTAATGA
 GCTTCCATACAATGACTACTTTGAATACTTTGGACCAGATTTCAAGCTCCACATCAGTCTTCCAATATG
 ACTAACCAAGAACCGAATGAGTACCTGGAGAAGATCAAACAGCGACTGTTTGAGAACCTTAGAATGCTGC
 CGCAGCACCTGGGGTCCAAATGCAGGCGATTCTGAGGACGCCATCCCTGAGGAGAGTGGCGATGAGGA
 CGAAGACGACCCCTGACAAGCGCATCTCGATCTGCTCCTCTGACAAACGAATTGCCTGTGAGGAAGAGTTC
 TCCGATTTCTGAAGAGGAGGAGAGGGGGCCGCAAGAAGTCTTCCAACCTCAAAAAAGCCAAAGAGAGTCA
 AAACAGAGGATGAAAAAGAGAAAGACCCAGAGGAGAAGAAAGAAGTACCAGGAGGAGAAAACCAAGGA
 GGAGAAGCCAGAAGCCAAAGGGGTCAAGGAGGAGTCAAGTTGGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC201745 representing NM_004964
 Red=Cloning site Green=Tags(s)

MAQTQGTRRKVCYYYDGDVGNYYYGQGHMPKPHRIRMTHNLLNYGLYRKMEIYRPHKANAEEMTKYHSD
 DYIKFLRSIRPDNMSEYSKQMRFNVEDCPVFDGLFEFCQLSTGGSVASAVKLNKQQTDIAVNWAGGLH
 HAKKSEASGFYVNDIVLAILELLKYHQRVLYIDIDIHHGDGVEEAFYTTDRVMTVSFHKYGEYFPGTGD
 LRDIGAGKGYAVNYPLRDGIDDESIEAIFKPVMSKVMEMFQPSAVVLQCGSDSLSGDRLGCFNLTIKG
 HAKCVEFVKSFNLPMLMLGGGYTIRNVARCWYETAVALDTEIPNELPYNDYFEYFGPDFKLHISPSNM
 TNQNTNEYLEKIKQRLFENLRMLPHAPGVQMQAIPEDAIPESGDEDEDDPKRISICSSDKRIACEE
 SDSEEEGEGGRKNSSNFKKAKRVKTEDEKEKDPEEKKEVTEEEKTKEEKPEAKGVKEEVKLA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mg2751_g09.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:

ACCN: NM_004964

ORF Size: 1446 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_004964.3](#)

RefSeq Size: 2091 bp

RefSeq ORF: 1449 bp

Locus ID: 3065

UniProt ID: [Q13547](#)

Cytogenetics: 1p35.2-p35.1

Domains: Hist_deacetyl

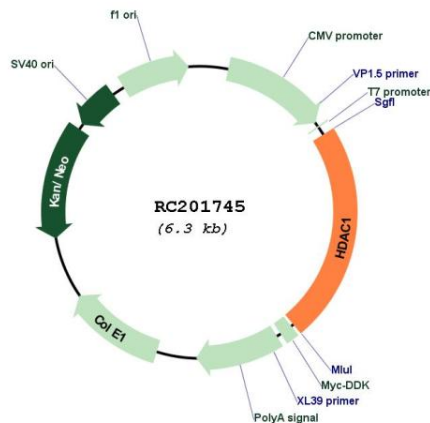
Protein Families: Adult stem cells, Druggable Genome, Stem cell - Pluripotency, Stem cell relevant signaling - DSL/Notch pathway, Transcription Factors

Protein Pathways: Cell cycle, Chronic myeloid leukemia, Huntington's disease, Notch signaling pathway, Pathways in cancer

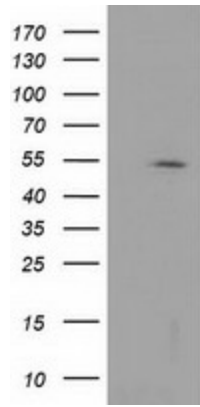
MW: 54.9 kDa

Gene Summary: Histone acetylation and deacetylation, catalyzed by multisubunit complexes, play a key role in the regulation of eukaryotic gene expression. The protein encoded by this gene belongs to the histone deacetylase/acuc/apha family and is a component of the histone deacetylase complex. It also interacts with retinoblastoma tumor-suppressor protein and this complex is a key element in the control of cell proliferation and differentiation. Together with metastasis-associated protein-2, it deacetylates p53 and modulates its effect on cell growth and apoptosis. [provided by RefSeq, Jul 2008]

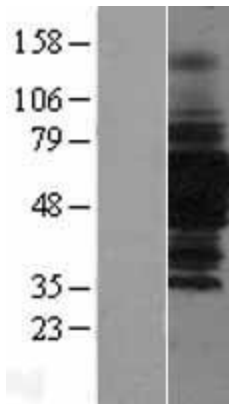
Product images:



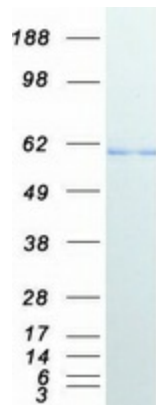
Circular map for RC201745



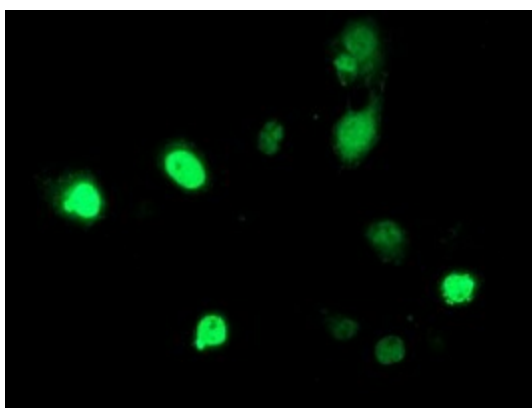
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY HDAC1 (Cat# RC201745, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-HDAC1 (Cat# [TA502193]). Positive lysates [LY417624] (100ug) and [LC417624] (20ug) can be purchased separately from OriGene.



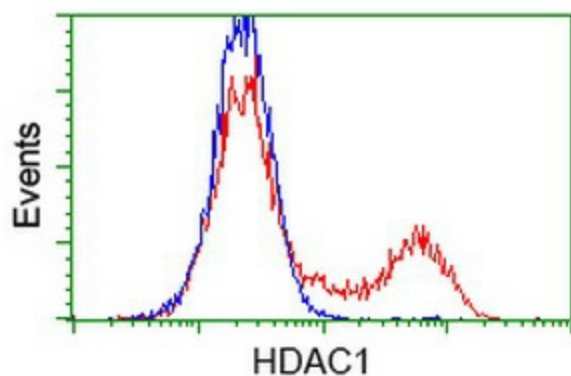
Western blot validation of overexpression lysate (Cat# [LY417624]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201745 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HDAC1 protein (Cat# [TP301745]). The protein was produced from HEK293T cells transfected with HDAC1 cDNA clone (Cat# RC201745) using MegaTran 2.0 (Cat# [TT210002]).



Anti-HDAC1 mouse monoclonal antibody ([TA502193]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY HDAC1 (RC201745).



HEK293T cells transfected with either RC201745 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-HDAC1 antibody ([TA502193]), and then analyzed by flow cytometry.