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Product datasheet for RR205681

Hdac1 (NM_001025409) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Hdac1 (NM_001025409) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Hdac1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

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ORF Nucleotide Sequence:

>RR205681 representing NM_001025409
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGCAGACTCAGGGCACCAAGAGGAAAGTCTGTTACTACTACGACGGGGATGTTGGAAACTACTATT
ATGGACAAGGGCACCCAATGAAGCCTCACCGAATCCGAATGACTCATAATTTGCTGCTCAACTATGGTCT
CTACCGAAAAATGGAAATCTATCGTCCTCACAAAGCCAACGCTGAGGAGATGACCAAGTACCACAGCGAC
GACTACATCAAGTTCTTGCGTTCTATTCGCCCAGACAATATGTCTGAATACAGCAAGCAGATGCAGAGAT
TCAACGTGGGTGAGGACTGTCCGGTATTTGATGGCTTGTTTGAGTTCTGTCAGTTGTCCACGGGTGGCTC
TGTCGCGAGTGCTGTGAAACTCAATAAGCAGCAGACGGACATCGCTGTGAACTGGGCTGGGGGCCTGCAC
CATGCGAAGAAGTCTGAAGCATCCGGCTTCTGTTACGTCAATGATATTGTCTTGGCCATCCTGGAACTGC
TAAAGTATCACCAGAGGGTGCTGTATATTGACATTGACATTCACCATGGCGATGGCGTGGAAGAGGCCTT
CTATACCACAGACCGGGTCATGACTGTGTCCTTTCATAAATACGGAGAGTACTTCCCAGGAACTGGGGAC
CTACGGGATATTGGGGCTGGCAAAGGCAAGTACTACGCCGTTAACTACCCACTGCGAGATGGCATTGATG
ATGAGTCCTATGAAGCCATCTTTAAGCCAGTCATGTCCAAAGTAATGGAGATGTTCCAGCCTAGTGCAGT
GGTCCTACAGTGCGGCTCAGACTCCCTGTCTGGGGATCGGCTAGGTTGCTTCAATCTGACCATCAAAGGA
CATGCCAAGTGTGTGGAGTTCGTGAAGAGTTTCAACTTGCCGATGCTAATGTTGGGAGGAGGTGGCTATA
CCATCCGTAATGTCGCTCGGTGCTGGACTTACGAGACAGCTGTGGCCCTGGACACAGAGATCCCTAATGA
GCTACCATACAATGACTACTTTGAATACTTTGGACCAGATTTCAAGCTTCACATCAGCCCTTCCAATATG
ACTAACCAGAACACTAATGAATACCTGGAGAAGATCAAGCAGCGGCTCTTTGAGAACTTGAGAATGCTGC
CCCATGCCCCTGGGGTCCAAATGCAGGCCATCCCAGAGGATGCCATCCCAGAAGAGAGCGGTGATGAGGA
TGAGGAAGACCCTGACAAACGAATTTCCATCTGCTCCTCTGACAAACGCATTGCCTGTGAGGAGGAATTC
TCTGATTCTGATGAGGAGGGAGAAGGAGGTCGCAAGAACTCTTCTAACTTCAAAAAAGCCAAAAGAGTCA
AAACAGAAGATGAAAAAGAAAAAGATCCCGAGGAGAAAAAAGAAGTCACAGAAGAGGAGAAAACCAAGGA
GGAGAAGCCAGAAGCCAAAGGGGTCAAAGAAGAGGTCAAGATGGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

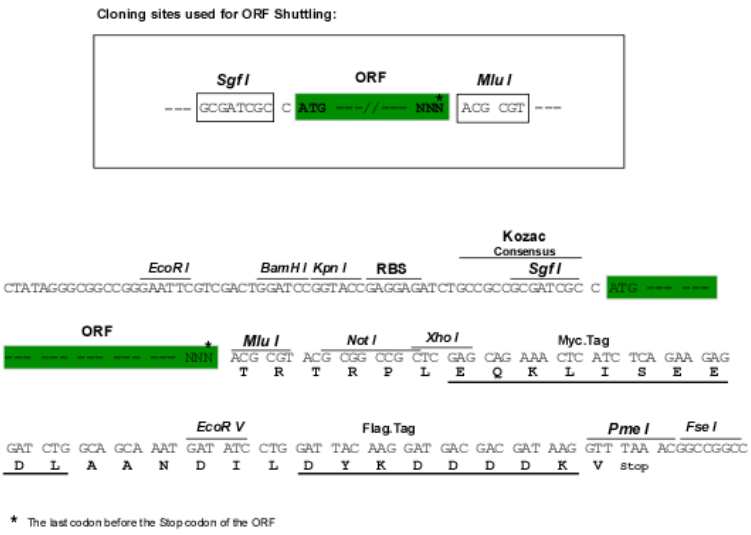
>RR205681 representing NM_001025409
Red=Cloning site Green=Tags(s)

MAQTQGTKRKVCYYYDGDVGNYYYGQGHPMKPHRIRMTHNLLLNYGLYRKMEIYRPHKANAEEMTKYHSD
DYIKFLRSIRPDNMSEYSKQMQRFNVGEDCPVFDGLFEFCQLSTGGSVASAVKLNKQQTDIAVNWAGGLH
HAKKSEASGFCYVNDIVLAILELLKYHQRVLYIDIDIHHGDGVEEAFYTTDRVMTVSFHKYGEYFPGTGD
LRDIGAGKGKYYAVNYPLRDGIDDESYEAIFKPVMSKVMEMFQPSAVVLQCGSDSLSGDRLGCFNLTIKG
HAKCVEFVKSFNLPMLMLGGGGYTIRNVARCWTYETAVALDTEIPNELPYNDYFEYFGPDFKLHISPSNM
TNQNTNEYLEKIKQRLFENLRMLPHAPGVQMQAIPEDAIPEESGDEDEEDPDKRISICSSDKRIACEEEF
SDSDEEGEGGRKNSSNFKKAKRVKTEDEKEKDPEEKKEVTEEEKTKEEKPEAKGVKEEVKMA

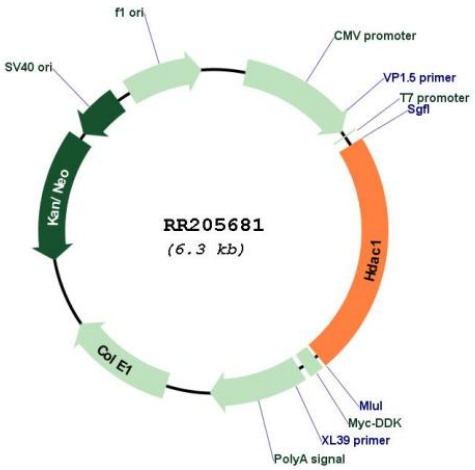
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001025409

ORF Size: 1446 bp

OTI Disclaimer: 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.
RefSeq:	NM_001025409.1, NP_001020580.1
RefSeq Size:	2035 bp
RefSeq ORF:	1449 bp
Locus ID:	297893
UniProt ID:	Q4QQW4
Cytogenetics:	5q36
MW:	55.1 kDa
Gene Summary:	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.[UniProtKB/Swiss-Prot Function]