

## Product datasheet for **RG211495**

### HDAC4 (NM\_006037) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	HDAC4 (NM_006037) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	HDAC4
Synonyms:	AHO3; BDMR; HA6116; HD4; HDAC-4; HDAC-A; HDACA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG211495 representing NM_006037 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGC**

ATGAGCTCCCAAAGCCATCCAGATGGACTTTCTGGCCGAGACCAGCCAGTGGAGCTGCTGAATCCTGCC  
GCGTGAACCACATGCCAGCACGGTGGATGTGGCCACGGCGTGCCTCTGCAAGTGGCCCCCTCGGCAGT  
GCCCATGGACCTGCGCCTGGACCACCAGTTCTCACTGCCTGTGGCAGAGCCGGCCCTGCGGGAGCAGCAG  
CTGCAGCAGGAGCTCCTGGCGCTCAAGCAGAAGCAGCAGATCCAGAGGCAGATCCTCATCGCTGAGTTCC  
AGAGGCAGCAGCAGCAGCTCTCCGGCAGCAGGCGCAGCTCCACGAGCACATCAAGCAACAACAGGA  
GATGCTGGCCATGAAGCACCAGCAGGAGCTGCTGGAACACCAGCGGAAGCTGGAGAGGCACCGCCAGGAG  
CAGGAGCTGGAGAAGCAGCACCGGGAGCAGAAGCTGCAGCAGCTCAAGAACAAGGAGAAGGGCAAAGAGA  
GTGCCGTGGCCAGCACAGAAGTGAAGTGAAGTTACAAGAATTTGTCTCAATAAAAAGAAGGCGCTGGC  
CCACCGGAATCTGAACCACTGCATTTCCAGCGACCCTCGCTACTGGTACGGGAAAACGCAGCACAGTTCC  
CTTGACCAGAGTTCTCCACCCAGAGCGGAGTGTGCACCTCCTATAACCACCCGGTCTGGGAATGTACG  
ACGCCAAAGATGACTTCCCTCTTAGGAAAACAGCTTCTGAACCGAATCTGAAATTACGGTCCAGGCTAAA  
GCAGAAAGTGGCCGAAAGACGGAGCAGCCCCCTGTTACGCAGGAAAGACGGGCCAGTGGTCACTGCTCTA  
AAAAAGCGTCCGTTGGATGTCACAGACTCCGCGTGCAGCAGCAGCCAGGCTCCGGACCCAGCTCACCCA  
ACAAAGCTCCGGAGCGTCAGCGCGGAGAACGGTATCGCGCCCGCCGTCACAGCATCCCGCGGAGAGAC  
GAGTTTGGCGCACAGACTTGTGGCAGGAAAGGCTCGGCCGCTCCACTTCCCCTTACACATCGCCATCC  
TTGCCAACATCAGCTGGGCTGCCTGCCACCGGCCCTCTGCGGGCACGGCGGGCCAGCAGGACGCCG  
AGAGACTCACCTTCCCGCCCTCAGCAGAGGCTCTCCCTTTTCCCGGCACCCACCTCACTCCCTACCT  
GAGCACCTCGCCCTTGGAGCGGGACGGAGGGGACGCGCACAGCCCTTTCTGCAGCACATGGTCTTACTG  
GAGCAGCCCGGCACAAGCACCCCTCGTCACAGGCTGGGAGCACTGCCCTCCACGCACAGTCTTTGG  
TTGGTGCAGACCGGTGTCCCCCTCCATCCACAAGCTGCGGCAGCAGCCCACTGGGGCGGACCCAGTC  
GGCCCCGTGCCCAAGACGCCAGGCTCTGCAGCACCTGGTATCCAGCAGCAGCATCAGCAGTTTCTG



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GAGAAACACAAGCAGCAGTTCACGACGAGCAACTGCAGATGAACAAGATCATCCCCAAGCCAAGCGAGC  
 CAGCCCGGAGCCGAGAGCCACCCGGAGGAGACGGAGGAGGAGCTCCGTGAGCACCAGGCTCTGCTGGA  
 CGAGCCCTACCTGGACCGGCTGCCGGGGCAGAAGGAGGCGCACGACAGGCCGGCGTGCAGGTGAAGCAG  
 GAGCCATTGAGAGCGATGAGGAAGAGGCGAGCCCCACGGGAGGTGGAGCCGGCCAGCGCCAGCCCA  
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 CCGGCTCCCTGCGGTGGTGTGGGGTGGACAGTACACCATATGGAACGAGGTGCACCTCGCGGGGGCA  
 GCCCGCTGGCTGTGGGCTGCGTGGTAGAGCTGGTCTCAAGGTGGCCACAGGGGAGCTGAAGAATGGCT  
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 CGTGGCCGTGGCAGCCAAGCTTCTGCAGCAGAGGTTGAGCGTGAGCAAGATCCTCATCGTGGACTGGAC  
 GTGCACCATGGAACGGGACCCAGCAGGCTTCTACAGCGACCCAGCGTCTGTACATGTCCCTCCACC  
 GCTACGACGATGGGAACCTTCTCCAGGACGCGGGCTCCTGATGAGGTGGGCACAGGGCCCGCGTGGG  
 TTTCAACGTCAACATGGCTTTCACCGCGGCTGGACCCCCCATGGGAGACGCTGAGTACTTGGCGGCC  
 TTCAGAACGGTGGTATGCCGATCGCCAGCGAGTTGCCCGGATGTGGTGTGTCATCAGGCTTCG  
 ATGCCGTGGAGGGCCACCCACCCTCTGGGGGCTACAACCTCTCCGCCAGATGCTTGGGTACCTGAC  
 GAAGCAGCTGATGGGCTGGCTGGCGGCCGATGTCTGGCCCTCGAGGGAGGCCACGACCTGACCGCC  
 ATTTGCGACGCTCGGAAGCATGTTTTCTGCCTTGTGGGAAACGAGCTTGATCCTCTCCAGAAAAGG  
 TTTTACAGCAAGACCCAAATGCAAAACGCTGCCGTTCCATGGAGAAAGTATGGAGATCCACAGCAAGTA  
 CTGGCGCTGCCTGCAGCGCACAACCTCCACAGCGGGGCTTCTCTGATCGAGGCTCAGACTTGCAGAAC  
 GAAGAAGCCGAGACGGTACCGCATGGCTCGCTGTCCGTGGGCGTGAAGCCCGCCGAAAAGAGACCAG  
 ATGAGGAGCCCATGGAAGAGGAGCCGCCCTG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG211495 representing NM\_006037  
 Red=Cloning site Green=Tags(s)

MSSQSHPDGLSGRDQPVPELLNPARVNHMPSTVDVATALPLQVAPSAVPMDLRLDHQFSLPVAEPALREQQ  
 LQQELLALKKQKQIQRQILIAEFQRQHEQLSRQHEAQLHEHIKQQQEMLAMKHQQELLEHQKLERHRQE  
 QELEKQHREQLQQLKNKEKGKESAVASTEVMKMLQEFVLNKKKALAHNRLNHCISSDPRYWGKTQHSS  
 LDQSSPPQSGVSTSYNHPVLGMYDAKDDFPLRKTASEPNLKLRSRLKQKVAERRSSPLLRRKDGPVVVAL  
 KKRPLDVTDSACSSAPGSGPSSPNNSSGSVSAENGIAPAVPSIPAETSLAHLRVAREGSAAPLPLYTS  
 LPNITLGLPATGPSAGTAGQDAERLTLPALQQRSLFPGTHLTPYLSTSPLELDGGAHSPLLQHMVLL  
 EQPPAQAPLVTGLGALPLHAQSLVGADRVSPSIHKLQRHRPLGRQSAPLPQNAQALQHLVIQQQHQQFL  
 EKHKQFQQQQLQMNKIIPKPSEPARQPESHPEETEEELREHQALLDEPYLDRLPGQKEAHAQAGVQVKQ  
 EPIESDEEEAEPREVEPQRPSEQELFRQQALLLEQQRIHQLRNYQASMEAAGIPVFSFGGHRPLSRA  
 QSSPASATFPVSVQEPPTKPRFTTGLVYDTLMLKHQCTCGSSSSHPEHAGRIQSIWSRLQETGLRGKCEC  
 IRGRKATLEELQTVHSEHTLLYGTNPLNRQKLDKSKLLGSLASVVFVRLPCGGVGVSDTIWNEVHSAGA  
 ARLAVGCVVELVFKVATGELKNGFAVVRPPGHHAEESTPMGFVCFNSVAVAAKLLQQRLSVSKILIVDWD  
 VHHGNGTQQAFYSDPSVLYMSLHRYDDGNFFPGSGAPDEVGTGPGVGFNVNMAFTGGLDPPMGDAEYLAA  
 FRTVVMPIASEFAPDVVLVSSGFDAVEGHPTPLGGYNLSARCFGYLTKQLMGLAGGRIVLLEGGHDLTA  
 ICDASEACYSALLGNELDPLPEKVLQQRPNANAVRSMKYMIEHSKYWRCLQRTTSTAGRSLIEAQTCCEN  
 EEAETVTAMASLSVGKPAEKRPDEEPMEEPPPL

TRTRPLE – GFP Tag – V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_006037

**ORF Size:** 3252 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](mailto: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.

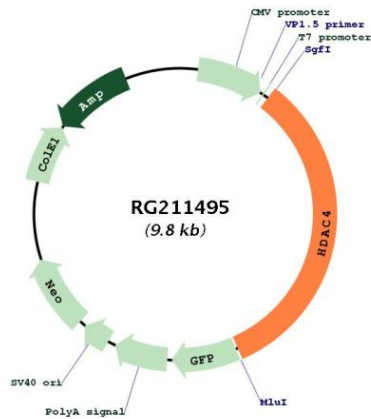
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**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.

**RefSeq:** [NM\\_006037.4](#)  
**RefSeq Size:** 8459 bp  
**RefSeq ORF:** 3255 bp  
  
**Locus ID:** 9759  
**UniProt ID:** [P56524](#)  
**Cytogenetics:** 2q37.3  
**Domains:** Hist\_deacetyl  
**Protein Families:** Druggable Genome, Transcription Factors  
**Gene Summary:** 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 II of the histone deacetylase/acuc/apha family. It possesses histone deacetylase activity and represses transcription when tethered to a promoter. This protein does not bind DNA directly, but through transcription factors MEF2C and MEF2D. It seems to interact in a multiprotein complex with RbAp48 and HDAC3. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RG211495