

Product datasheet for **RG213094**

HAT1 (NM_003642) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HAT1 (NM_003642) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	HAT1
Synonyms:	KAT1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG213094 ORF sequence, **codon optimized**.
 Due to the complexity of NM_003642, the ORF clone is codon optimized for mammalian Expression.
 The nucleotide sequence differs from the reference sequence, yet the amino acid sequence remains identical.

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**CGCATCGCC**

ATGGCCGGCTTCGGCGCTATGGAGAAATTTCTCGTTGAATACAAGTCTGCCGTGGAGAAGAAATGGCGGAGTACAAGTGAATACCAACTGCTATTGAACCAAATGGTTCGTTCCCGAAGACCTCGAAAATGACATCAGGACATTTTTCCAGAATACTCATCAGCTGTCGGGGACGATGAAACAGCCTTTGGTTATAAAGCCTCAAATCTGCTCTACTACATTGCAGGAAGCTTGAGCACCATGTTCCGCGTAGAATATGCGAGTAGGTGGATGAGAATTTGACTGCGTTCGAGGCCGACGATGTGGAAGGGAAGATACGGCAGATCATCCCTCCGGCTTTTGTACTAATACCAATGACTTTCTTTCCCTGCTCGAAAAGGAGGTGGACTTCAAGCCTTTCCGGCACCTGTGCATACCTACAGTGTGCTTTCTCTACTGGCGGGGAAAACCTCACGTTCCAAATCTACAAGCCGACATGACTTGTAGAGGGTTTCGGGAGTACCATGAGAGGTTGCAGACTTTTCTCATGTGGTTCATCGAACGGCCTCATTATCGACGTGGATGATGAGCGCTGGCACTACTTTCTGGTATTTGAAAAGTACAATAAGGACGGCGCCACATTGTTTGGCAGTGTGGGTACATGACCGTGTACAATTACTACGTTTATCCGGACAAGACACGCCACGAGTAAGTCAGATGCTGATCCTTACCCCTTCCAAGGCCAGGGACACGGCCGCAATTGCTTGAACTGTCCACCGCTACTATACCGAGTTCGCCACTGTGCTCGATATTACAGCTGAGGACCCCTCCAAGTCCTACGTGAAGCTGCGAGATTTTGTGTTGGTGAAACTGTGCCAAGATCTCCCTGTTTCCCGAGAAAAGCTGATGCAGGGATTTAACGAGGACATGGCCATCGAAGCCAGCAGAAGTTTAAAATTAACAAGCAGCACGCTAGGCGAGTTATGAAATTTGAGGCTCTTGGTCACAGATATGAGCGACGCCGAACAGTATAGGTCTTACCGGCTCGACATAAACGGCGGCTGATACACCTTATAAGAAGAAACAGCGAGATCTGGCAAAAATGAGAAAATGTCTGAGGCCCGAGGAGCTTACTAACCAAATGAATCAGATCGAGATTTCAATGCAACATGAACA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG213094 representing NM_003642
 Red=Cloning site Green=Tags(s)

MAGFGAMEKFLVEYKSAVEKLAEYKCNNTAIELKLVRFPELNDIRLFFPEYTHQLFGDDETAFGYKGLKILLYYIAGSLSTMFRVEYASKVDENFDCVEADDVEGKIRQIIPPGFCTNTNDFLSLLEKEVDFKPFGLLLHTYSVLSPTGGENFTFQIYKADMTCRGFREYHERLQTFLMWF IETASFIDVDDERWHYFLVFEKYKDGATLFATVGYMTVYNYVYYPDKTRPRVSQMLILTPFQGGHGAQLLETVHRYYTEFPPTVLDITAEDPSKSYVKLRDFVLVKLCQDLPCFSREKLMQGFNEDMAIEAQQKFKINKQHARRVYEILRLLVTDMSDAEQYRSYRLDIKRRRLISPYKKQRDLAKMRKCLRPEELTNQMNQIEISMQHEQLEESFQELVEDYRRVIERLAQE

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



EcoRI
BamHI *KpnI*
RBS
Kozac
Consensus
SgfI
AscI

CTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGSAGATCTGCCGCCGATCGCCGGCGGCCAGATCT

HindIII
NheI *RsrII*
MluI
NotI
XhoI
GFP Tag

CAAGCTTAAGCTAGCTAGCGGACCG ACG CGT ACG CGG CCG CTC GAG ATG GAG AGC GAC --- --- ---

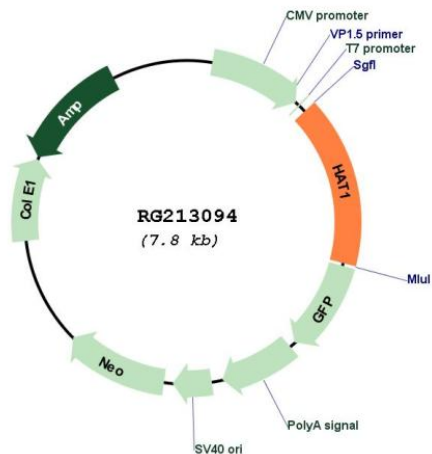
T R T R P L E
M E S D - - -

PmeI
FseI

--- --- GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT

- - - E E R V Stop

Plasmid Map:



ACCN: NM_003642

ORF Size: 1257 bp

OTI Disclaimer:	<p>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.</p> <p>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</p>
OTI Annotation:	<p>This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.</p>
Components:	<p>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).</p>
Reconstitution Method:	<ol style="list-style-type: none">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:	<p>NM_003642.2, NP_003633.1</p>
RefSeq Size:	<p>1634 bp</p>
RefSeq ORF:	<p>1260 bp</p>
Locus ID:	<p>8520</p>
UniProt ID:	<p>O14929</p>
Cytogenetics:	<p>2q31.1</p>
Protein Families:	<p>Druggable Genome</p>
Gene Summary:	<p>The protein encoded by this gene is a type B histone acetyltransferase (HAT) that is involved in the rapid acetylation of newly synthesized cytoplasmic histones, which are in turn imported into the nucleus for de novo deposition onto nascent DNA chains. Histone acetylation, particularly of histone H4, plays an important role in replication-dependent chromatin assembly. Specifically, this HAT can acetylate soluble but not nucleosomal histone H4 at lysines 5 and 12, and to a lesser degree, histone H2A at lysine 5. Alternatively spliced transcript variants have been identified for this gene. [provided by RefSeq, Jun 2009]</p>