

## Product datasheet for **RG212196**

### CRAT (NM\_000755) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CRAT (NM_000755) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CRAT
Synonyms:	CAT; CAT1; NBIA8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG212196 representing NM\_000755  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTTAGCCTTCGCTGCCAGGACCGTGGTGAAGCCTCTGGGCTTCTGAAGCCCTTCTCCTTGATGAAGG  
 CTTCAGCCGCTTCAAGGCACACCAGGATGCACTGCCACGGCTGCCCGTGCCCTCTCCAGCAGTCCCT  
 GGACCACTACCTGAAGGCGCTGCAGCCATCGTGAGTGAGGAGGAGTGGGCCACACCAAGCAGCTGGTG  
 GATGAGTTTCAGGCCTCAGGAGGTGTAGGGGAGCGCTGCAGAAGGGGCTGGAGCGTCGGCCAGGAAGA  
 CGGAGAAGTGGCTGTCTGAGTGGTGGCTCAAGACCGCCTACCTCCAGTACCGCCAGCCTGTGGTATCTA  
 CTCGAGCCAGGCGTGATGCTACCCAAGCAGGACTTCGTGGACCTGCAGGGTCACTCCGATTTGCTGCC  
 AAACCTATTGAGGGTGTGTTGGATTTCAAGGTCATGATTGACAACGAGACCCTGCCCGTGGAGTACCTGG  
 GGGGAAGCCACTGTGCATGAACCAAGTACTATCAGATCTTGTCTCCTGCCGAGTCCCGGGCCCAAGCA  
 GGACACAGTCAGCAACTCAGCAAGACCAAGAAGCCTCCACGCACATCACCGTGTACACAACCTACCAG  
 TTTTTGAGCTGGATGTGTACCACAGTGACGGGACACCCCTCACTGCGGATCAGATCTTTGTGCAGCTGG  
 AGAAGATCTGAACTCATCCCTACAGACCAACAAGGAGCCTGTGGGCATCCTCACCTCCAACCACCGCAA  
 CTCCTGGGCCAAGGCATACAACACCCTCATCAAAGACAAGGTGAACCGGGATTCCGTGCGCTCCATCCAG  
 AAGAGCATCTTACCCTGTGCCTAGATGCAACCATGCCAGGGTCTCAGAAGACGTGTACCGCAGCCACG  
 TGGCAGGCCAGATGTGCATGGGGCGGCAGCAGGCTCAACAGCGGCAACCGCTGGTTCGACAAGACGCT  
 GCAGTTTCACTCGTGGCAAAAGATGGCTCCTGTGGCTTGTGTACGAGCATGCTGCAGCGGAGGGGCCCT  
 ATTTGTCACCCCTTCTGGACTATGTCATCGAGTACACGAAGAAACCCGAGCTTGTGCGGTCTCCATGGTGC  
 CCCTGCCATGCCAAGAAGCTGCGGTTCAACATCACCCCGAGATCAAGAGCGACATCGAGAAGGCCAA  
 GCAGAACCCTCAGCATCATGATCCAGGACCTGGATATCACCGTGATGGTGTCCACCATTTTGAAAAGAC  
 TCCCCAAGTCGAGAAGCTAAGCCAGATGCCTTCATCCAGATGGCTTTCAGCTGGCCTACTACAGGA  
 TCTACGGACAGGCATGTGCCACCTATGAAAGTGCCTCCCTGCGCATGTTTCACTGGGCCGACCCGACAC  
 CATCCGCTCGGCTTCCATGGACTCACTCACCTTGTCAAGGCCATGGATGACTCCAGCGTCACGGAGCAC  
 CAGAAGGTGGAGCTGCTGCGGAAGGCCGTGCAGGCCACCCGAGGCTACACCGACCGGCCATCCGCGGG  
 AGGCCTTTGATCGACACCTGCTGGGCTGAAGCTGCAGGCCATCGAGGACCTGGTGAAGTATGCCGACAT  
 CTTTATGGACACCTCCTACGCCATCGCCATGCACCTTCCACCTCTCCACCAGCCAGGTCCTGCCAAGACA  
 GACTGTGTATGTTCTTCCGGCCGTGGTCCCCGACGGCTACGGTGTCTGTATAACCCCATGGAGGCC  
 ACATCAACTTCTCCCTGTCCGCTACAACAGCTGCGCGGAGACCAACGCCGCCCGCTGGCGCATTACCT  
 GGAGAAGGCGCTCCTGGACATGCGTGCCCTGCTGCAGAGCCACCCCGGGCCAAGCTC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG212196 representing NM\_000755  
 Red=Cloning site Green=Tags(s)

MLAFAARTVVKPLGFLKPFSLMKASSRFKAHQDALPRLPVPPLQQSLDHYLKALQPIVSEEEWAHTKQLV  
 DEFQASGGVGERLQKGLERRARKTENWLSEWWLKTAYLQYRQPVIYSSPGVMLPKQDFVDLQGGQLRFAA  
 KLIEGVLDKVMIDNETLPVEYLGKPLCMNQYYQILSSCRVPGPKQDVTSNFSKTKKPPHTITVVHNYQ  
 FFELDVYHSDGTPLTADQIFVQLEKIWNSSLQTNKEPVGILTSNHRNSWAKAYNTLIKDKVNRDSVRSIQ  
 KSIFTVCLDATMPRVSEDVYRSHVAGQMLHGGGSRNLNSGNRWFDTLQFIVAKDGSCLVYEHAAAEPPP  
 IVTLDDYVIEYTKPELVSRPMVPLPMPKLRFNITPEIKSDIEKAKQNLSIMIQDLITVMVFHHFGKD  
 FPKSEKLSPDFIQMALQLAYRYIYGACATYESASLRMFHLGRDITIRSASMDSLTFVKAMDDSSVTEH  
 QKVELLRKAVQAHRGYTDRAIRGEAFDRHLLGLKLQAIEDLVSMPIFMDTSYAIAMHFLSTSQVPAKT  
 DCMVFFGPVVPDGYGVYCNPMEAHINFSLSAYNSCAETNAARLAHYLEKALLDMRALLQSHPRAKL

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_000755

**ORF Size:** 1878 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\\_000755.5](#)

**RefSeq Size:** 2804 bp

**RefSeq ORF:** 1881 bp

**Locus ID:** 1384

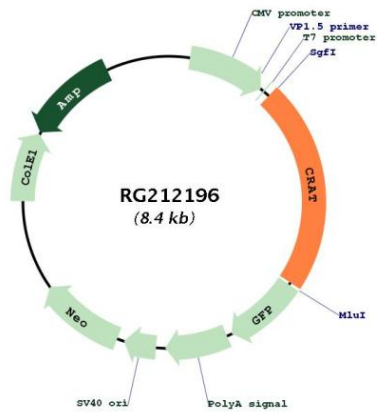
**Cytogenetics:** 9q34.11

**Domains:** Carn\_acyltransf

**Protein Families:** Druggable Genome

**Gene Summary:** This gene encodes carnitine O-acetyltransferase, a member of the carnitine acyltransferase family and a key metabolic pathway enzyme which plays an important role in energy homeostasis and fat metabolism. This enzyme catalyzes the reversible transfer of acyl groups from an acyl-CoA thioester to carnitine and regulates the ratio of acyl-CoA/CoA. It is found in both the mitochondria and the peroxisome. Alternative splicing results in transcript variants encoding different isoforms that may localize to different subcellular compartments. [provided by RefSeq, Oct 2016]

**Product images:**



Circular map for RG212196