

## Product datasheet for **RC200474**

### **GATM (NM\_001482) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GATM (NM_001482) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GATM
Synonyms:	AGAT; AT; CCDS3; FRTS1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC200474 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCTGCGGGTGC GG TGTCTGCGCGCGGGAGCCGCGGCCGAGCGGGTGC ACTACATCGGATCTCGGC  
 TTGGACGAACCTTGACAGGATGGGTGCAGCGAACTTCCAGAGCACCCAGGCAGCTACGGCTTCTCCCG  
 GAACTCCTGTGCAGCTGACGACAAAGCCACTGAGCCTCTGCCAAGGACTGCCCTGTCTTCTTACAAC  
 GAATGGGACCCCTTAGAGGAAGTGATAGTGGGCAGAGCAGAAAACGCCTGTGTTCCACCGTTCACCATCG  
 AGGTGAAGGCCAACACATATGAAAAGTACTGGCCATTTTACCAGAAGCAAGGAGGGCATTATTTCCCAA  
 AGATCATTTGAAAAGGCTGTTGCTGAAATTGAAGAAATGTGCAATATTTTAAAAACGGAAGGAGTGACA  
 GTAAGGAGGCCTGACCCATTGACTGGTCATTGAAGTATAAACTCCTGATTTTGAGTCTACGGTTTAT  
 ACAGTGAATGCCTCGAGACATCCTGATAGTTGTGGGCAATGAGATTATCGAGGCTCCCATGGCATGGCG  
 TTCACGCTTCTTTGAGTACCGAGCGTACAGGTCAATTATCAAAGACTACTCCACCGTGGCGCCAAGTGG  
 ACAACAGCTCCTAAGCCACAATGGCTGATGAGCTTTATAAACCAGGATTATCCCATCCACTCTGTAGAAG  
 ACAGACACAAATTGGCTGCTCAGGGAAAATTTGTGACAACTGAGTTTGAGCCATGCTTTGATGCTGCTGA  
 CTTTCATTCCGAGCTGGAAGAGATATTTTGCACAGAGAAGCCAGGTTACAACTACCTAGGCATTGAATGG  
 ATGCGTAGGCATCTTGCTCCAGACTACAGAGTGCATATCATCTCCTTTAAAGATCCCAATCCCATGCATA  
 TTGATGCTACCTCAACATCATTGGACCTGGTATTGTGCTTTCCAACCTGACCGACCATGTCACCAGAT  
 TGATCTTTTCAAGAAAGCAGGATGGACTATCATTACTCCTCAACACCAATCATCCAGACGATCATCCA  
 CTCTGGATGTCATCCAAATGGCTTCCATGAATGCTTAAATGCTAGATGAAAAACGTGTTATGGTGGATG  
 CCAATGAAGTTCCAATTCAAAAGATGTTTGAAGCTGGGTATCACTACCATTAAGTTAACATTGTTAA  
 TGCCAATTCCTGGGAGGAGGCTTCCATTGCTGGACCTGCGATGTCCGGCGCCGAGGCACCTTACAGTCC  
 TACTTGGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC200474 protein sequence  
 Red=Cloning site Green=Tags(s)

MLRVRCLRGGSRGAEAVHYIGSRLGRTL TGWVQRTFQSTQAATASSRNSCAADDKATEPLPKDCPVSSYN  
 EWDPLEEVIVGRAENACVPPFTIEVKANTYEKYWPFYQKQGGHYFPKDHLKKAIAEIEEMCNILKTEGVT  
 VRRPDPIDWSLKYKTPDFESTGLYSAMPRDILIVVGNIEEAPMAWRSRFFEYRAYRSIIKDYFHRGAKW  
 TTAPKPTMADEL YNQDYP IHSVEDRHKLAAQGFVTTEFEP CFDAADFIRAGRDIFAQRSQVTNYLGI EW  
 MRRHLAPDYRVHIISFKDPNPMHIDATFNIIGPGIVLSNPDRPCHQIDL FKKAGWTIITPPTPIIPDDHP  
 LWMSSKWL SMNVLM LDEKRV MVDANEVPIQKMF EKLGITTIKVNIRNANSLGGGFHCWTCVRRRGTLQS  
 YLD

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6401\\_d12.zip](https://cdn.origene.com/chromatograms/mk6401_d12.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_001482

**ORF Size:** 1269 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\\_001482.3](#)

**RefSeq Size:** 2602 bp

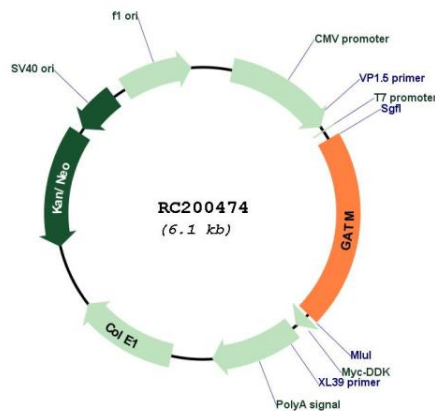
**RefSeq ORF:** 1272 bp

**Locus ID:** 2628

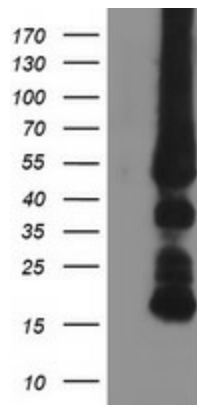
**UniProt ID:** [P50440](#)

**Cytogenetics:** 15q21.1

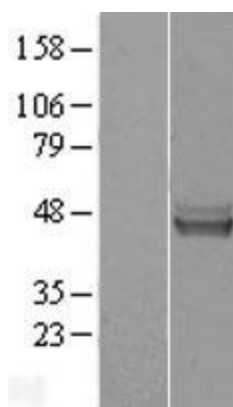
<b>Domains:</b>	Amidinotransf
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Arginine and proline metabolism, Glycine, serine and threonine metabolism, Metabolic pathways
<b>MW:</b>	48.5 kDa
<b>Gene Summary:</b>	This gene encodes a mitochondrial enzyme that belongs to the amidinotransferase family. This enzyme is involved in creatine biosynthesis, whereby it catalyzes the transfer of a guanido group from L-arginine to glycine, resulting in guanidinoacetic acid, the immediate precursor of creatine. Mutations in this gene cause arginine:glycine amidinotransferase deficiency, an inborn error of creatine synthesis characterized by cognitive disability, language impairment, and behavioral disorders. [provided by RefSeq, Jul 2008]

**Product images:**


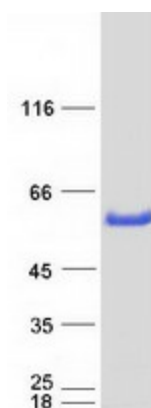
Circular map for RC200474



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY GATM (Cat# RC200474, 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-GATM (Cat# [TA503207]). Positive lysates [LY419923] (100ug) and [LC419923] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419923]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200474 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GATM protein (Cat# [TP300474]). The protein was produced from HEK293T cells transfected with GATM cDNA clone (Cat# RC200474) using MegaTran 2.0 (Cat# [TT210002]).