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Product datasheet for RC214343

Aminomethyltransferase (AMT) (NM_000481) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aminomethyltransferase (AMT) (NM_000481) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Aminomethyltransferase
Synonyms:	GCE; GCST; GCVT; NKH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC214343 representing NM_000481
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCAGAGGGCTGTAAGTGTGGTGGCCCGTCTGGGCTTTCGCCTGCAGGCATTCCCCCCGGCCTTGTGTC
GTCCACTTAGTTGCGCACAGGAGGTGCTCCGCAGGACACCGCTCTATGACTTCCACCTGGCCCACGGCGG
GAAAATGGTGGCGTTTGCGGGTTGGAGTCTGCCAGTGCAGTACCGGGACAGTCACACTGACTCGCACCTG
CACACACGCCAGCACTGCTCGCTCTTTGACGTGTCTCATATGCTGCAGACCAAGATACTTGGTAGTGACC
GGGTGAAGCTGATGGAGAGTCTAGTGGTTGGAGACATTGCAGAGCTAAGACCAAACCAGGGGACACTGTC
GCTGTTTACCAACGAGGCTGGAGGCATCTTAGATGACTTGATTGTAACCAATACTTCTGAGGGCCACCTG
TATGTGGTGTCCAACGCTGGCTGCTGGGAGAAAGATTTGGCCCTCATGCAGGACAAGGTCAGGGAGCTTC
AGAACCAGGGCAGAGATGTGGGCCTGGAGGTGTTGGATAATGCCCTGCTAGCTCTGCAAGGCCCCACTGC
AGCCCAGGTACTACAGGCCGGCGTGGCAGATGACCTGAGGAAACTGCCCTTCATGACCAGTGCTGTGATG
GAGGTGTTTGGCGTGTCTGGCTGCCGCGTGACCCGCTGTGGCTACACAGGAGAGGATGGTGTGGAGATCT
CGGTGCCGGTAGCGGGGGCAGTTCACCTGGCAACAGCTATTCTGAAAAACCCAGAGGTGAAGCTGGCAGG
GCTGGCAGCCAGGGACAGCCTGCGCCTGGAGGCAGGCCTCTGCCTGTATGGGAATGACATTGATGAACAC
ACTACACCTGTGGAGGGCAGCCTCAGTTGGACACTGGGGAAGCGCCGCCGAGCTGCTATGGACTTCCCTG
GAGCCAAGGTCATTGTTCCCCAGCTGAAGGGCAGGGTGCAGCGGAGGCGTGTGGGGTTGATGTGTGAGGG
GGCCCCCATGCGGGCACACAGTCCCATCCTGAACATGGAGGGTACCAAGATTGGTACTGTGACTAGTGGC
TGCCCCTCCCCCTCTCTGAAGAAGAATGTGGCGATGGGTTATGTGCCCTGCGAGTACAGTCGTCCAGGGA
CAATGCTGCTGGTAGAGGTGCGGCGGAAGCAGCAGATGGCTGTAGTCAGCAAGATGCCCTTTGTGCCCAC
AAACTACTATACCCTCAAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC214343 representing NM_000481
Red=Cloning site Green=Tags(s)

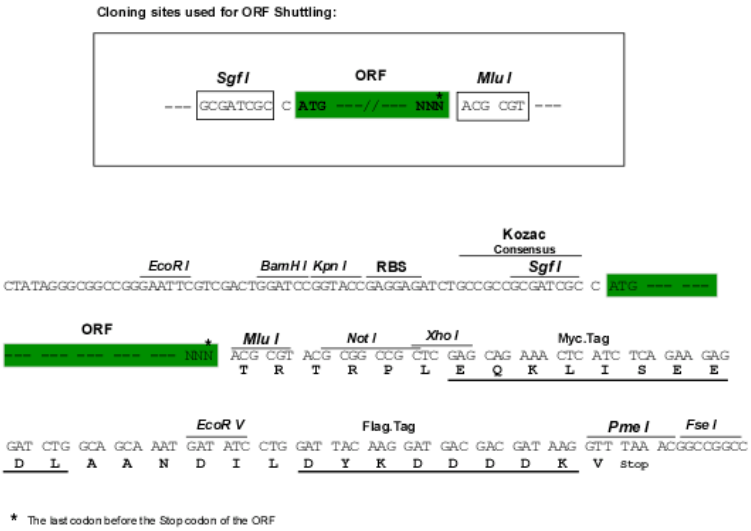
MQRAVSVVARLGFRLQAFPPALCRPLSCAQEVLRRTPLYDFHLAHGGKMVAFAGWSLPVQYRDSHTDSHL
HTRQHCSLFDVSHMLQTKILGSDRVKLMESLVVGDIAELRPNQGTLSLFTNEAGGILDDLIVTNTSEGHL
YVVSNAGCWEKDLALMQDKVRELQNQGRDVGLEVLDNALLALQGPTAAQVLQAGVADDLRKLPFMTSAVM
EVFGVSGCRVTRCGYTGEDGVEISVPVAGAVHLATAILKNPEVKLAGLAARDSLRLEAGLCLYGNDIDEH
TTPVEGSLSWTLGKRRRAAMDFPGAKVIVPQLKGRVQRRRVGLMCEGAPMRAHSPILNMEGTKIGTVTSG
CPSPSLKKNVAMGYVPCEYSRPGTMLLVEVRRKQQMAVVSKMPFVPTNYYTLK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8030_f03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000481

ORF Size: 1209 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_000481.4

RefSeq Size: 2117 bp

RefSeq ORF: 1212 bp

Locus ID: 275

UniProt ID: P48728

Cytogenetics: 3p21.31

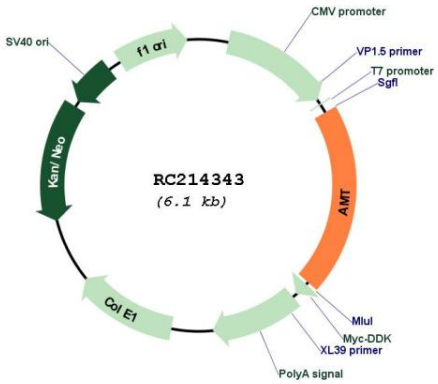
Domains: GCV_T

Protein Pathways: Glycine, serine and threonine metabolism, Metabolic pathways, Nitrogen metabolism, One carbon pool by folate

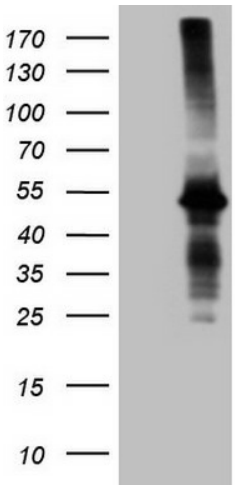
MW: 43.8 kDa

Gene Summary: This gene encodes one of four critical components of the glycine cleavage system. Mutations in this gene have been associated with glycine encephalopathy. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2011]

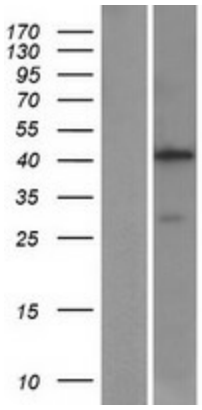
Product images:



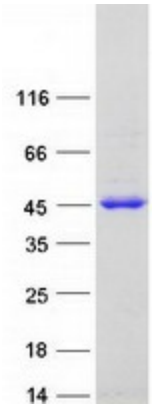
Circular map for RC214343



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY AMT (Cat# RC214343, 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-AMT (Cat# [TA807784])(1:2000). Positive lysates [LY424691] (100ug) and [LC424691] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424691]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214343 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified AMT protein (Cat# [TP314343]). The protein was produced from HEK293T cells transfected with AMT cDNA clone (Cat# RC214343) using MegaTran 2.0 (Cat# [TT210002]).