

## Product datasheet for **RC221282**

### **NAGS (NM\_153006) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	NAGS (NM_153006) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NAGS
Synonyms:	AGAS; ARGA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC221282 representing NM\_153006  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCGACGGCGCTGATGGCTGTGGTTCTGCGGGCAGCTGCTGTAGCCCCGAGGCTGAGAGGCCGGGGAG  
 GCACTGGGGCGCCCAAGGCTGAGCTGTGGCGCGCGCGGGCGGGCAGGGGACCAGCCCGGGCG  
 CCGGCTCAGCACCGCCTGGTCGACGCCAGCCCCGCCCCGAGGAGTACGCGGGCGGGACGACGCTCTCC  
 CAGTCGCCCGTCGCCGAGGAGCGCTCGTGGGTGCCGAGTCCCAGGCCCGGTCGCCACGAGTCCCAG  
 AGCCTCCTTCGGGCCGCTCGCTGGTGCAGCGGGACATCCAGGCCTTCTGAACAGTGGGGGCCAGCCC  
 TGGGGAGGCGGCCACTGGCTCACGCAGTTCAGACCTGCCATCACTCCGCGGACAAGCCCTTCGCCGTC  
 ATCGAGGTGGACGAGGAGGTGCTCAAGTCCAGCAGGGCGTATCCAGTCTGGCCTTTGCCCTGGCCTTCT  
 TGCAGCGCATGGACATGAAGCCGCTGGTGGTCTGGGGTCCCGGCCCTACGGCTCCCTCGGGCTGTCT  
 TTCCTTCTGGGAGCCAAGGCGCAGCTGGCCAAGAGCTGCAAGGTGCTGGTAGACGCGCTTGACACAAC  
 GCCGCCGCTGCTGTGCCATTTTTGGCGCGGGTCTGTGCTACGCGCTGCCGAGCCGGCTCCCCATGCCA  
 GCTACGGCGGCATCGTCTCGGTGGAGACAGACCTGCTGCAGTGGTGCCTGGAGTCCGGCAGCATCCCCAT  
 CCTGTGCCCATCGGGGAGACGGCCGCGCGCCGCTCCGTGCTTCTCGACTCCCTGGAGGTGACCGCGTCG  
 CTGGCCAAGGCGCTGCGGCCACCAAAATCATTTCTCAATAACACAGGCGGCTGCGCGACAGCAGTC  
 ATAAGGTCTGAGTAACGTGAACCTGCCCGCCGACCTGGACCTGGTGTGCAACGCCGAGTGGGTGAGCAC  
 AAAAGAACGGCAGCAGATGCGGCTCATCGTGGACGTGCTCAGCCGCTGCCACCCTCCTCGGCCGTC  
 ATCACCGCCGCTAGCACGCTGCTCACTGAGCTCTTAGCAACAAGGGTCCGGGACCCTGTTCAAGAACG  
 CCGAGCGAATGCTACGGGTGCGCAGCTGGACAAGCTGGACCAGGGCCGCTAGTGGACCTGGTCAACGC  
 CAGCTTCGGCAAGAAGCTCAGGGACGACTACCTGGCCTCGCTGCCGCCGGCTGCACTCCATCTACGTC  
 TCCGAGGGGTACAACGCCGCCATTCTGACCATGGAGCCGCTCCTGGGGGACCCCCGTACCTGGACA  
 AATTTGTGGTGAAGTCCAGCCGCCAGGGCCAAGGCTCCGGCCAGATGCTGTGGAGTGCCTGCGCGGGGA  
 CCTTCAGACACTTTTCTGGCGCTCCCGGTCACCAACCCCATCAATCCCTGGTACTTCAAACACAGTGAT  
 GGCAGTCTTCCAACAAGCAGTGGATCTTCTTCTGGTTTGGCCTGGCTGATATCCGGGACTCCTATGAGT  
 TGGTCAACCACGCCAAGGACTGCCAGACTCCTTTCACAAGCCAGCTTCTGACCCAGGCAGC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC221282 representing NM\_153006  
 Red=Cloning site Green=Tags(s)

MATALMAVVLRAAAVAPRLRGRGGTGGARRLSCGARRRAARGTSPGRRLSTAWSQPQPPEEYAGADDVS  
 QSPVAEEPSWVSPRPPVPHESPEPPSGRSLVQRDIQAFLNQCGASPGEARHWLTQFQTHHSADKPFVAV  
 IEVDDEEVLKQCQGVSSALAFALAFQRMDMKPLVVLGLPAPTAPSGCLSFWEAKAQLAKSCKVLVDALRHN  
 AAAAVPFFGGGSLRAAEPAPHASYGGIVSVETDLLQWCLESIPILCPIGETAARRSVLLDSLEVTAS  
 LAKALRPTKIIFLNNTGGLRDSSHKVLSNVNLPADLDLVCNAEWVSTKERQMQMLIVDVL SRLPHHSSAV  
 ITAASTLLTELF SNKGSGLFKNAERMLRVRSLDKLDQGRVLDL VNASFGKLRDDYLASLRPRLHSIYV  
 SEGYNAAAILTMEPVLGGTPYLDKFFVSSSRQGGSGQMLWECLRRDLQTLFWRSRVTNPINPWYFKHSD  
 GSF SNKQWIFFWGLADIRDSYELVNHAKGLPDSFHKPASDPGS

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk8043\\_c08.zip](https://cdn.origene.com/chromatograms/mk8043_c08.zip)

**Restriction Sites:**

SgfI-MluI

Cloning Scheme:



ACCN: NM\_153006

ORF Size: 1602 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\\_153006.3](#)

RefSeq Size: 2086 bp

RefSeq ORF: 1605 bp

Locus ID: 162417

UniProt ID: [Q8N159](#)

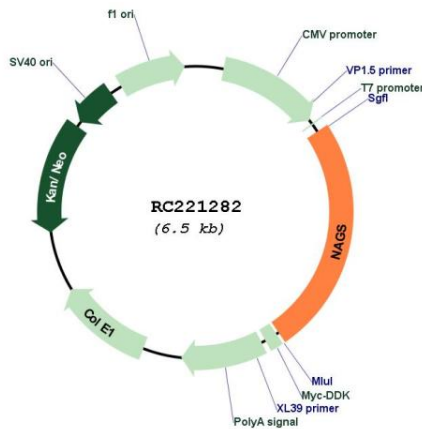
Cytogenetics: 17q21.31

**Protein Pathways:** Arginine and proline metabolism, Metabolic pathways

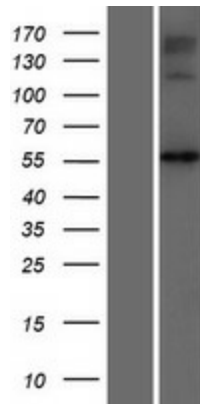
**MW:** 58 kDa

**Gene Summary:** The N-acetylglutamate synthase gene encodes a mitochondrial enzyme that catalyzes the formation of N-acetylglutamate (NAG) from glutamate and acetyl coenzyme-A. NAG is a cofactor of carbamyl phosphate synthetase I (CPSI), the first enzyme of the urea cycle in mammals. This gene may regulate ureagenesis by altering NAG availability and, thereby, CPSI activity. Deficiencies in N-acetylglutamate synthase have been associated with hyperammonemia. [provided by RefSeq, Jul 2008]

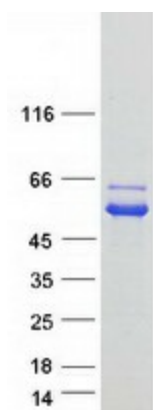
**Product images:**



Circular map for RC221282



Western blot validation of overexpression lysate (Cat# [LY407192]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221282 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NAGS protein (Cat# [TP321282]). The protein was produced from HEK293T cells transfected with NAGS cDNA clone (Cat# RC221282) using MegaTran 2.0 (Cat# [TT210002]).