

Product datasheet for **RG221282**

NAGS (NM_153006) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NAGS (NM_153006) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	NAGS
Synonyms:	AGAS; ARGA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG221282 representing NM_153006
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCGACGGCGCTGATGGCTGTGGTTCTGCGGGCAGCTGCTGTAGCCCCGAGGCTGAGAGCGCGGGGAG
 GCACTGGGGGCGCCCAAGGCTGAGCTGTGGCGCGCGCGGGCGGCGAGGGGACCAGCCCGGGGCG
 CCGGCTCAGCACCGCCTGGTCGACGCCAGCCCCGCCCCGAGGAGTACGCGGGCGCGGACGACGTCTCC
 CAGTCGCCCGTCGCCGAGGAGCGCTCGTGGGTGCCGAGTCCCAGGCCCGCGTCCCCACGAGTCCCCAG
 AGCCTCCTTCGGGCCGCTCGCTGGTGCAGCGGGACATCCAGGCCTTCTGAACAGTGGCGGGCCAGCCC
 TGGGGAGGCGCGCACTGGCTCACGCAGTTCAGACCTGCCATCACTCCGCGGACAAGCCCTTCGCCGTC
 ATCGAGGTGGACGAGGAGGTGCTCAAGTCCAGCAGGGCGTATCCAGTCTGGCCTTTGCCCTGGCCTTCT
 TGCAGCGCATGGACATGAAGCCGCTGGTGGTCTGGGGCTGCCGCCCCACGGCTCCCTCGGGCTGTCT
 TTCCTTCTGGGAGCCAAGGCGCAGCTGGCCAAGAGCTGCAAGGTGCTGGTAGACGCGCTTCGACACAAC
 GCCGCCGCTGCTGTGCCATTTTTGGCGCGGGTCTGTGTACGCGCTGCCGAGCCGGCTCCCCATGCCA
 GCTACGGCGGCATCGTCTCGGTGGAGACAGACCTGCTGCAGTGGTGCCTGGAGTCCGGCAGCATCCCCAT
 CCTGTGCCCATCGGGGAGACGGCCGCGCGCCGCTCCGTGCTTCTCGACTCCCTGGAGGTGACCGCGTGC
 CTGGCCAAAGGCGCTGCGGCCACCAAAATCATTTCTCAATAACACAGGCGGCCGCGCGACAGCAGTC
 ATAAGGTCTGAGTAACGTGAACCTGCCCGCCGACCTGGACCTGGTGTGCAACGCCGAGTGGGTGAGCAC
 AAAAGAACGGCAGCAGATGCGGCTCATCGTGGACGTGCTCAGCCGCTGCCCCACCACTCCTCGGCCGTC
 ATCACCGCCGCTAGCACGCTGCTCACTGAGCTCTTAGCAACAAGGGGTCCGGGACCCTGTTCAAGAACG
 CCGAGCGAATGCTACGGGTGCGCAGCCTGGACAAGCTGGACCAGGGCCGCTAGTGGACCTGGTCAACGC
 CAGCTTCGGCAAGAAGCTCAGGGACGACTACCTGGCCTCGCTGCCGCCGCGGCTGCACTCCATCTACGTC
 TCCGAGGGGTACAACGCCCGCCATTCTGACCATGGAGCCCGTCTGGGGGGCACCCCGTACCTGGACA
 AATTTGTGGTGAAGTCCAGCCGCCAGGGCCAAGGCTCCGGCCAGATGCTGTGGAGTGCCTGCGCGGGGA
 CCTTCAGACACTTTTCTGGCGCTCCCGGTCACCAACCCCATCAATCCCTGGTACTTCAAACACAGTGAT
 GGCAGTCTTCCAACAAGCAGTGGATCTTCTTCTGGTTTGGCCTGGCTGATATCCGGGACTCCTATGAGT
 TGGTCAACCACGCCAAGGACTGCCAGACTCCTTTCACAAGCCAGCTTCTGACCCAGGCAGC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG221282 representing NM_153006
 Red=Cloning site Green=Tags(s)

MATALMAVVLRAAAVAPRLRGRGGTGGARRLSCGARRRAARGTSPGRRLSTAWSQPQPPEEYAGADDVS
 QSPVAEEPSWVSPRPPVPHESEPPSGRSLVQRDIQAFLNQCGASPGEARHWLTQFQTCCHSADKPFVAV
 IEVDEEVLKCCQGVSSALAFALAFLRMDMKPLVVLGLPAPTAPSGCLSFWEAKAQLAKSCKVLDALRHN
 AAAAVPFFGGGSLRAAEPAPHASYGGIVSVETDLLQWCLESISIPILCPIGETAARRSVLLDSLEVTAS
 LAKALRPTKIIIFLNNTGGLRDSSHKVLNVNLPADLDLVCNAEWVSTKERQMRILVDVLSRPHSSAV
 ITAASTLLTELFNKGSGTLFKNAERMLRVRSLDKLDQGRVLDL VNASFGKLRDDYLA SLRPHHSIYV
 SEGYNAAAILTMEPVLGGTPYLDKFFVSSSRQGGSGQMLWECLRRDLQTLFWRSRVTNPINPWYFKHSD
 GFSNKGWIFFWGLADIRDSYELVNHAKGLPDSFHKPASDPGS

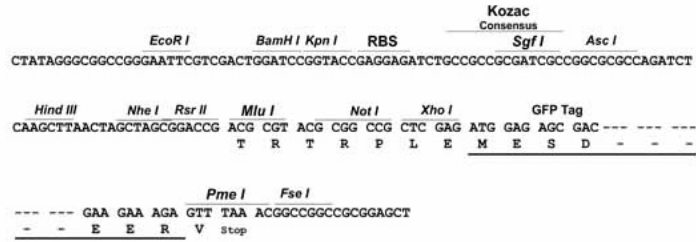
TRTRPLE – GFP Tag – V

Restriction Sites:

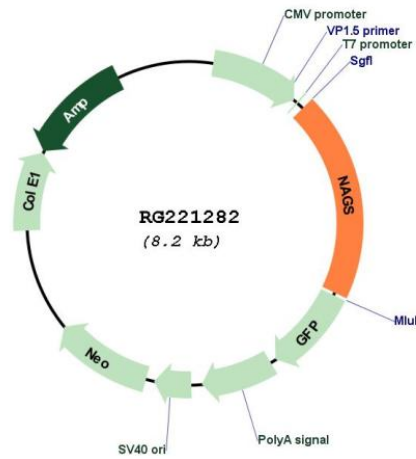
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



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:	<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:	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
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]