

Product datasheet for **RG208033**

GAA (NM_001079804) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GAA (NM_001079804) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GAA
Synonyms:	LYAG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG208033 representing NM_001079804
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGAGTGAGGCACCCGCCCTGCTCCACCGGCTCCTGGCCGTCTGCGCCCTCGTGTCTTGGCAACCG
 CTGCACTCCTGGGGCACATCCTACTCCATGATTTCTGCTGGTTCCCGAGAGCTGAGTGCTCCTCCCC
 AGTCCTGGAGGAGACTCACCCAGCTCACAGCAGGGAGCCAGTAGACCAGGGCCCGGGATGCCAGGCA
 CACCCCGGCCGTCAGAGCAGTCCCACACAGTGCAGCTCCCCCAACAGCCGCTTCGATTGCGCCC
 CTGACAAGGCCATCACCCAGAACAGTGCAGGGCCCGGGCTGTTGCTACATCCCTGCAAAGCAGGGGT
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 TCCTGACCCTGCGGCTGGACGTGATGATGGAGACTGAGAACCCTCCACTTCACGATCAAAGATCCAGC
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 TCCTGGACATCTGTGTCGCTGTTGATGGGAGAGCAGTTTCTGTCAGCTGGTGT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG208033 representing NM_001079804
 Red=Cloning site Green=Tags(s)

MGVRHPPCSHRLAVCALVSLATAALLGHILLHDFLLVPRELSGSSPVLEETHPAHQGASRPGPRDAQA
 HPGRPRAVPTQCDVPPNSRFDCAPDKAITQEQCEARGCCYIPAKQGLQGAQMGPWCFFPPSYPSYKLEN
 LSSEMGYTATL TRTPTFFPKDILTLRLDVMETENRLHFTIKDPANRRRYEVPLETPHVHSRAPSPLYS
 VEFSEEPFGVIVRRQLDGRVLLNTTVAPLFFADQFLQLSTSLPSQYITGLAEHL SPLMLSTSWTRITLWN
 RDLAPTPGANLYGSHPFYLALEDGGS AHGVFLLSNAMDVVLQSPALSWRSTGGILDVYIFLGPEPKSV
 VQQYLDVVGYPFMPYWGLGFHL CRWGSSTAITRQVVENMTRAHFPLDVQWNDLDYMSRRDFTFNKDG
 FRDFPAMVQELHQGRRYMMIVDPAISSSGPAGSYRYPYDEGLRRGVFITNETGQPLIGKVVPGSTAFPDF
 TNPTALAWWEDMVAEFHDQVPFDGMWIDMNEPSNFIRGSEDGCPNNELENPPYVPGVVGTLQAATICAS
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 ILQFNLLGVPLVGADVCGFLGNTSEELCVRWTLGAFYPFMRNHNLSLSPQEPYSFSEPAQQAMRKALT
 LRYALLPHLYTLFHQAHVAGETVARPLFLEFPKDSSTWVDHQLLWGEALLITPVLQAGKAEVTGYFPLG
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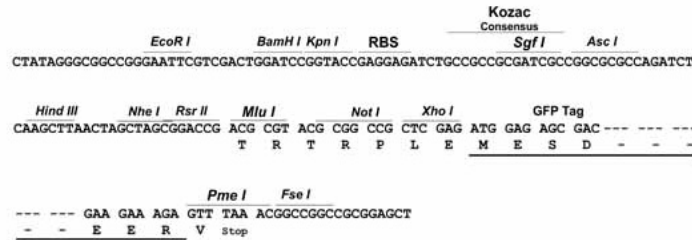
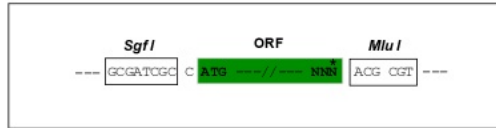
TRTRPLE – GFP Tag – V

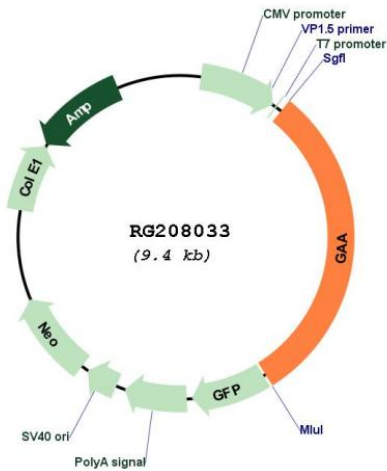
Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:


ACCN: NM_001079804

ORF Size: 2856 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_001079804.1](#), [NP_001073272.1](#)

RefSeq Size: 3517 bp

RefSeq ORF: 2859 bp

Locus ID: 2548

UniProt ID: [P10253](#)

Cytogenetics: 17q25.3

Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Galactose metabolism, Lysosome, Metabolic pathways, Starch and sucrose metabolism
Gene Summary:	This gene encodes lysosomal alpha-glucosidase, which is essential for the degradation of glycogen to glucose in lysosomes. The encoded preproprotein is proteolytically processed to generate multiple intermediate forms and the mature form of the enzyme. Defects in this gene are the cause of glycogen storage disease II, also known as Pompe's disease, which is an autosomal recessive disorder with a broad clinical spectrum. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2016]