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Product datasheet for SC125512

GAA (NM_000152) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GAA (NM_000152) Human Untagged Clone
Tag:	Tag Free
Symbol:	GAA
Synonyms:	LYAG
Mammalian Cell Selection:	None
Vector:	pCMV6-XL6
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene ORF within SC125512 sequence for NM_000152 edited (data generated by NextGen Sequencing)

ATGGGAGTGAGGCACCCGCCCTGCTCCCACCGGCTCCTGGCCGTCTGCGCCCTCGTGTCC
TTGGCAACCGCTGCACTCCTGGGGCACATCCTACTCCATGATTTCCTGCTGGTTCCCCGA
GAGCTGAGTGGCTCCTCCCCAGTCCTGGAGGAGACTCACCCAGCTCACCAGCAGGGAGCC
AGCAGACCAGGGCCCCGGGATGCCCAGGCACACCCCGGCCGTCCCAGAGCAGTGCCCACA
CAGTGCGACGTCCCCCCCAACAGCCGCTTCGATTGCGCCCCTGACAAGGCCATCACCCAG
GAACAGTGCGAGGCCCGCGGCTGTTGCTACATCCCTGCAAAGCAGGGGCTGCAGGGAGCC
CAGATGGGGCAGCCCTGGTGCTTCTTCCCACCCAGCTACCCCAGCTACAAGCTGGAGAAC
CTGAGCTCCTCTGAAATGGGCTACACGGCCACCCTGACCCGTACCACCCCCACCTTCTTC
CCCAAGGACATCCTGACCCTGCGGCTGGACGTGATGATGGAGACTGAGAACCGCCTCCAC
TTCACGATCAAAGATCCAGCTAACAGGCGCTACGAGGTGCCCTTGGAGACCCCGCATGTC
CACAGCCGGGCACCGTCCCCACTCTACAGCGTGGAGTTCTCCGAGGAGCCCTTCGGGGTG
ATCGTGCGCCGGCAGCTGGACGGCCGCGTGCTGCTGAACACGACGGTGGCGCCCCTGTTC
TTTGCGGACCAGTTCCTTCAGCTGTCCACCTCGCTGCCCTCGCAGTATATCACAGGCCTC
GCCGAGCACCTCAGTCCCCTGATGCTCAGCACCAGCTGGACCAGGATCACCCTGTGGAAC
CGGGACCTTGCGCCCACGCCCGGTGCGAACCTCTACGGGTCTCACCCTTTCTACCTGGCG
CTGGAGGACGGCGGGTCGGCACACGGGGTGTTCCTGCTAAACAGCAATGCCATGGATGTG
GTCCTGCAGCCGAGCCCTGCCCTTAGCTGGAGGTCGACAGGTGGGATCCTGGATGTCTAC
ATCTTCCTGGGCCCAGAGCCCAAGAGCGTGGTGCAGCAGTACCTGGACGTTGTGGGATAC
CCGTTCATGCCGCCATACTGGGGCCTGGGCTTCCACCTGTGCCGCTGGGGCTACTCCTCC
ACCGCTATCACCCGCCAGGTGGTGGAGAACATGACCAGGGCCCACTTCCCCCTGGACGTC
CAGTGGAACGACCTGGACTACATGGACTCCCGGAGGGACTTCACGTTCAACAAGGATGGC
TTCCGGGACTTCCCGGCCATGGTGCAGGAGCTGCACCAGGGCGGCCGGCGCTACATGATG
ATCGTGGATCCTGCCATCAGCAGCTCGGGCCCTGCCGGGAGCTACAGGCCCTACGACGAG
GGTCTGCGGAGGGGGGTTTTCATCACCAACGAGACCGGCCAGCCGCTGATTGGGAAGGTA
TGGCCCGGGTCCACTGCCTTCCCCGACTTCACCAACCCCACAGCCCTGGCCTGGTGGGAG

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GACATGGTGGCTGAGTTCCATGACCAGGTGCCCTTCGACGGCATGTGGATTGACATGAAC
GAGCCTTCCAACTTCATCAGGGGCTCTGAGGACGGCTGCCCCAACAATGAGCTGGAGAAC
CCACCCTACGTGCCTGGGGTGGTTGGGGGGACCCTCCAGGCGGCCACCATCTGTGCCTCC
AGCCACCAGTTTCTCTCCACACACTACAACCTGCACAACCTCTACGGCCTGACCGAAGCC
ATCGCCTCCCACAGGGCGCTGGTGAAGGCTCGGGGGACACGCCCATTTGTGATCTCCCGC
TCGACCTTTGCTGGCCACGGCCGATACGCCGGCCACTGGACGGGGGACGTGTGGAGCTCC
TGGGAGCAGCTCGCCTCCTCCGTGCCAGAAATCCTGCAGTTTAACCTGCTGGGGGTGCCT
CTGGTCGGGGCCGACGTCTGCGGCTTCCTGGGCAACACCTCAGAGGAGCTGTGTGTGCGC
TGGACCCAGCTGGGGGCCTTCTACCCCTTCATGCGGAACCACAACAGCCTGCTCAGTCTG
CCCCAGGAGCCGTACAGCTTCAGCGAGCCGGCCCAGCAGGCCATGAGGAAGGCCCTCACC
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GAGACCGTGGCCCGGCCCCTCTTCCTGGAGTTCCCCAAGGACTCTAGCACCTGGACTGTG
GACCACCAGCTCCTGTGGGGGGAGGCCCTGCTCATCACCCCAGTGCTCCAGGCCGGGAAG
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AGGAATAACACGATCGTGAATGAGCTGGTACGTGTGACCAGTGAGGGAGCTGGCCTGCAG
CTGCAGAAGGTGACTGTCCTGGGCGTGGCCACGGCGCCCCAGCAGGTCCTCTCCAACGGT
GTCCCTGTCTCCAACTTCACCTACAGCCCCGACACCAAGGTCCTGGACATCTGTGTCTCG
CTGTTGATGGGAGAGCAGTTTCTCGTCAGCTGGTGTTAG

Clone variation with respect to NM_000152.3

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_000152 unedited
TTTCCCCGCCCGTTGNCGCATTGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCA
GAGCTCATTTAGGTGACACTATAGAATACAAGCTACTTGTTCTTTTTGCAGCGGCCGCGA
ATTCGGCACGAGGGTGAGCCGGGCCGGGGCTGCGGGGCTTCCCTGAGCGCGGGCCGGGTC
GGTGGGGCGGTCGGCTGCCCGCGCGGCCTCTCAGTTGGGAAAGCTGAGGTTGTCGCCGGG
GCCGCGGGTGGAGGTCGGGGATGAGGCAGCAGGTAGGACAGTGACCTCGGTGACGCGAAG
GACCCCGGCCACCTCTAGGTTCTCCTCGTCCGCCCGTTGTTCAGCGAGGGAGGCTCTGCG
CGTGCCGCAGCTGACGGGGAAACTGAGGCACGGAGCGGGCCTGTAGGAGCTGTCCAGGCC
ATCTCCAACCATGGGAGTGAGGCACCCGCCCTGCTCCCACCGGCTCCTGGCCGTCTGCGC
CCTCGTGTCCTTGGCAACCGCTGCACTCCTGGGGCACATCCTACTCCATGATTTCCTGCT
GGTTCCCCGAGAGCTGAGTGGCTCCTCCCCAGTCCTGGAGGAGACTCACCCAGCTCACCA
GCAGGGAGCCAGCAGACCAGGGCCCNCGGGATGCCCAGGCACACCCCGGGCCGTCCCAGA
GCAGTGCCCACACAGTGCGACGTCCCCCCCACAGCCGCTTCGATTGCGCCCCTGACANGG
CCATCACCCAGNAACAGTGCGAGGCCCCGCGGCTGGTGCTACATCCCTGNCAAGCAGGGG
CTGCAGGGAGCCCANATGGGGCAGCCTGGTGCTTTTTCCACCAGCTACCCAGCTACAGCT
GGAGAACTGAGCTCTCTGAATGGGCTACACGGCACCCTGACCGTACACCCCCACTTCTTC
CCAGGACANCTGACCTGCGNNTGACGTGA

3' Read Nucleotide Sequence:

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>OriGene 3' read for NM_000152 unedited
TCNCCCCCAAGATCGTGGNACGCGGNCCCGCATTTTANGANCGNGTTTTTTTTTTTTTTT
TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTCCAAAGCCCCCTTTTATTAAAAATA
ATTGCACTTAAAATTTAAAATCTCCCAAGTCCTGGGAATTTTCCTGAGTTCCCAGGCTTG
CTCGGGGACCGGCAGGCATCCAGCCCTTTGGGCAGCCGGGCAGCGGTCGCGTTGGGGCAA
AGCAACAGGCCCGAAGCAGGAGCTCAGGTGCATACCCCACACCTCCACCTGAGCACCCCC
TTTTCCGGTGCTGGGAACAAATGGAGGGGGGTGGCTAATACTACCCGCATGCCGGCAACA
GGTGAGGAGGGCAAACCTTACAATCTTATTAACACAGAGCAGCCCTCCAGGGCCCCGGCC
CACAGTGCGATCTAGGGAAAAAGCTCTCCTAAACACGTTGGGGGCCAAAGCCCCGGCCCA
GGAGGGGGAAACAAGCGATGCGGCGGCTTGGAATGGTTAGTGCCCAGCTCCAGGTGACAC
ATGCAACCCCCAGGCCCGCACACAGTTGCTGCCCGCACACAGGCTCTGCTTCCCTGGGGA
ACCAGCCTCCCTCTGGAGAGACTAACACACTCCGCCCGGCTAACACCAGCTGACGAGAAA
CTGCTCTCCCATCAACAGCGAGACACAGATGTTCCAGGACCTTGGTGTCGGGGCTGTAGG
TGAAGTTGGAGACAGGGACACCGTTTGGAAAGGACCTGCTGGGGGCCCCCGGCCCACCCC
CAAGAAGTCACCTTCTGGAGGTGCAGGCCAACTCCCTTACTGGTCAAACGTACCAACTTA
TTCAGAATCGGGTTATTCCCTGGCCGA
```

Restriction Sites: NotI-NotI

ACCN: NM_000152

Insert Size: 3700 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_000152.2, NP_000143.1

RefSeq Size: 3846 bp

RefSeq ORF: 2859 bp

Locus ID: 2548

UniProt ID: P10253

Cytogenetics: 17q25.3

Domains: Glyco_hydro_31, PD

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] Transcript Variant: This variant (1) represents the longest transcript. Variants 1, 2, and 3 all encode the same protein.