

Product datasheet for **SC320202**

Glycogen synthase 1 (GYS1) (NM_002103) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glycogen synthase 1 (GYS1) (NM_002103) Human Untagged Clone
Tag:	Tag Free
Symbol:	Glycogen synthase 1
Synonyms:	GSY; GYS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_002103.3
 CTTCTGCCTAGGTCCCAACGCTTCGGGGCAGGGTGCGGTCTTGCAATAGGAAGCCGAGC
 GTCTTGCAAGCTTCCCGTCGGGCACCAAGCTACTCGCCCCGACCCCTACCTGGTGCATTC
 CCTAGACACCTCCGGGGTCCCTACCTGGAGATCCCCGGAGCCCCCTTCCTGCGCCAGCC
 ATGCCTTTAAACCGCACTTTGTCCATGTCTCACTGCCAGGACTGGAGGACTGGGAGGAT
 GAATTCGACCTGGAGAACGCAGTGCTCTTGAAGTGGCCTGGGAGGTGGTAACAAGGTG
 GGTGGCATCTACACGGTGTGCAGACGAAGGCGAAGGTGACAGGGGACGAATGGGGCGAC
 AACTACTTCTGGTGGGGCCGTACACGGAGCAGGGCGTGAGGACCCAGGTGGAATGCTG
 GAGGCCCCCACC CGCCCTGAAGAGGACTGGATTCCATGAACAGCAAGGGCTGCAAG
 GTGATTTTCGGGCGCTGGCTGATCGAGGGAGGCCCTCTGGTGGTCTCCTGGACGTGGT
 GCCTCAGCTTGGGCCCTGGAGCGCTGGAAGGGAGAGCTCTGGGATACCTGCAACATCGGA
 GTGCCGTGGTACGACCGGAGGCCAACGACGCTGTCTCTTTGGCTTTCTGACCACCTGG
 TTCTGGGTGAGTTCTTGGCACAGAGTGAGGAGAAGCCACATGTGGTTGCTCACTTCCAT
 GAGTGGTTGGCAGGCGTTGGACTCTGCCTGTGTGCTGCCCCGGCGACTGCCTGTAGCAACC
 ATCTTACCACCCATGCCACGCTGCTGGGGCGCTACCTGTGTGCCGGTGGCGTGGACTTC
 TACAACAACCTGGAGAATTCAACGTGGACAAGGAAGCAGGGGAGAGGCAGATCTACCAC
 CGATACTGCATGGAAAGGGCGGACGCCACTGCGCTCACGTCTTCACTACTGTGTCCCAG
 ATCACCGCCATCGAGGCACAGCACTTGTCAAGAGGAAACCAGATATTGTGACCCCAAT
 GGGCTGAATGTGAAGAAGTTTTCTGCCATGCATGAGTTCCAGAACCCTCCATGCTCAGAGC
 AAGGCTCGAATCCAGGAGTTTGTGCGGGGCCATTTTATGGGCATCTGGACTTCAACTTG
 GACAAGACCTTATACTTCTTTATCGCCGGCCGCTATGAGTTCTCCAACAAGGGTGTGAC
 GTCTTCTGGAGGCATTGGCTCGGCTCAACTATCTGCTCAGAGTGAACGGCAGCGAGCAG
 ACAGTGGTTGCCTTCTTTCATCATGCCAGCGCGACCAACAATTTCAACGTGGAAACCTC
 AAAGGCCAAGCTGTGCGCAAACAGCTTTGGGACACGGCCAACACGGTGAAGGAAAAGTTC
 GGGAGGAAGCTTTATGAATCCTTACTGGTTGGGAGCCTTCCCACATGAACAAGATGCTG
 GATAAGGAAGACTTCACTATGATGAAGAGGCCATCTTTGCAACGCAGCGGCAGTCTTTC
 CCCCTGTGTGACCCACAATATGCTGGATGACTCCTCAGACCCCATCTGACCACCATC



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CGCCGAATCGGCCTCTTCAATAGCAGTGCCGACAGGGTGAAGGTGATTTCCACCCGGAG
 TTCTCTCTCCACAAGCCCCCTGCTCCCTGTGGACTATGAGGAGTTTGTCCGTGGCTGT
 CACCTTGGAGTCTTCCCCTCCTACTATGAGCCTTGGGGCTACACACCCGGCTGAGTGCACG
 GTTATGGGAATCCCCAGTATCTCCACCAATCTCTCCGGCTTCGGCTGCTTATGGAGGAA
 CACATCGCAGACCCCTCAGCTTACGGTATCTACATTCTTGACCGGCGGTTCCGCAGCCTG
 GATGATTCTGCTCGCAGCTCACCTCCTCTACAGTTTCTGTCAGCAGAGCCGGCGG
 CAGCGTATCATCCAGCGGAACCGCACGGAGCGCCTCTCCGACCTTCTGGACTGGAATAC
 CTAGGCCGTAATATGTCTGCGGCCACATGGCGCTGTCCAAGGCCTTCCAGAGCAC
 TTCACCTACGAGCCCAACGAGGCGGATGCGGCCAGGGTACCGTACCCACGGCCAGCC
 TCGGTGCCACCGTCGCCCTCGCTGTACGACACTCCAGCCCGCACCAGAGTGAGGACGAG
 GAGGATCCCCGGAACGGGCGCTGGAGGAAGACGGCGAGCGCTACGATGAGGACGAGGAG
 GCCGCCAAGGACCGGCGCAACATCCGTGCACCAGAGTGGCCGCGCGAGCGTCTGCACC
 TCCTCCACCAGCGGCAGCAAGCGCAACTCTGTGGACACGGCCACCTCCAGCTCACTCAGC
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 CCCACCACACTCCCCGCTGTCTGCCTCTCTGCTCCAGAGAGAGGATGCAGAGGGGTGC
 TGCTCCTAAACCCCGCTCCAGATCTGCACTGGGTGTGGCCCGCAGTGCCCCACCCAG
 TCCGCCAAACACTCCACCCCTCCAGCTCCAGTTTCCAAGTTCCTGCACTCCAGAATCCA
 CAAAGCCGTGCCTTTCTGTGGTCCAGAATATGCATAATCAGCGCCCTGGAGTCCCCTGG
 GCCTGGACCGCTTCCAGAGGCCAGGAATCTGCCATTACTCTGCGGTGGTCCAGAGGTT
 TTAGGAAACCTGGCATGGTGCTTTCAGGTCTGGGGCTTTTAGAGCCCCCGTGTGGCTTA
 CAAATTCTACAGCATACAGAGCAGGCCACGCTCAGGCCCGCATGCGGGCCACCAAGTTC
 TGGAAACCACGTGGTGTCCCTGCGAATGGGGCGATCAAGTCCAGAGCCGGGGCACTTTCA
 GAGTTTGAAGTAACTGAGAGCAGATGGTCTCCATTTCAACTCCAGAAGTGGGGCTCTG
 GGAGGGATGTTCTAGCCCTCCCTGGCATGTCAGAGCCAGGCTCTGCCTGGAGGATCCCTC
 CATCCGGCTCCTGTATCCCCTACACTTTGGCCAAGCAAGAGGTGGTAGAACCACTTGGC
 TGCTCATTCTTCTGGAGGACACACAGTCTCAGTCCAGATGCCTTCTGTCTTTCTGGCC
 CTTTCTGGACCAGATCCTACTCTTCTTCTAAATCTGAGATCTCCCTCCAGGGAATCCG
 CCTGCAGAGGACAGAGCTGGCTGTCTTCCCCACCCCTAACCTGGCTTATTTCCAACTGC
 TCTGCCACTGTGAAACCACTAGGTTCTAGGCTCCTGGCTTCTAGATCTGGAACCTTACCA
 CGTTACTGCATACTGATCCCTTTCCCATGATCCAGAACTGAGGTCAGTGGTTCTAGAAC
 CCCACATTTACCTCGAGGCTCTCCATCCCCAACTGTGCCCTGCCTTCAGCTTTGGTG
 AAAGGGAGGGCCCTCATGTGTGCTGTGCTGTGCTGCACCGCTTGGTTTGCAGTTGAGA
 GGGGAGGGCAGGAGGGGTGATTGGAGTGTGTCGGGAGATGAGATGAAAAAATACATC
 TATATTTAAGAATCCCAAAAAAAAAAAAAAAAAA

- Restriction Sites:** Please inquire
- ACCN:** NM_002103
- 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).
- OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
- 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_002103.3](#), [NP_002094.2](#)

RefSeq Size: 3574 bp

RefSeq ORF: 2214 bp

Locus ID: 2997

UniProt ID: [P13807](#)

Cytogenetics: 19q13.33

Protein Pathways: Insulin signaling pathway, Starch and sucrose metabolism

Gene Summary: The protein encoded by this gene catalyzes the addition of glucose monomers to the growing glycogen molecule through the formation of alpha-1,4-glycoside linkages. Mutations in this gene are associated with muscle glycogen storage disease. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Sep 2009]

Transcript Variant: This variant (1) encodes the longer isoform (1).