

Product datasheet for **RC200940**

Glycogen synthase 1 (GYS1) (NM_002103) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glycogen synthase 1 (GYS1) (NM_002103) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Glycogen synthase 1
Synonyms:	GSY; GYS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>RC200940 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCTTTAAACCGCACTTTGTCCATGTCCTACTGCCAGGACTGGAGGACTGGGAGGATGAATTCGACC
 TGGAGAACGCAGTGCTCTTCGAAGTGGCCTGGGAGGTGGCTAACAAAGGTGGTGGCATCTACACGGTGCT
 GCAGACGAAGGCCAAGGTGACAGGGGACGAATGGGGCGCAACTACTTCCCTGGTGGGGCCGTACACGGAG
 CAGGGCGTGAGGACCCAGGTGGAAGTGTGAGAGGCCCCACCCCGGCCCTGAAGAGGACTGGATTCCA
 TGAACAGCAAGGGCTGCAAGGTGATTTTCGGGCGCTGGCTGATCGAGGGAGGCCCTCTGGTGGTCTCT
 GGACGTGGGTGCCTCAGCTTGGGCCCTGGAGCGCTGGAAGGGAGAGCTCTGGGATACCTGCAACATCGGA
 GTGCCGTGGTACGACCGGAGGCCAACGACGCTGTCTCTTTGGCTTTCTGACCACCTGGTTCTGGGTG
 AGTTCCTGGCACAGAGTGAGGAGAAGCCACATGTGGTTGCTCACTCCATGAGTGGTTGGCAGGCGTTGG
 ACTCTGCCTGTGTGCTGCCGGCGACTGCCTGTAGCAACCATCTCACCACCCATGCCACGCTGCTGGGG
 CGCTACCTGTGTGCCGGTGGCCTGGACTTCTACAACAACCTGGAGAACTCAACGTGGACAAGGAAGCAG
 GGGAGAGGCAGATCTACCACCGATACTGCATGGAAGGGCGGCAGCCCACTGCGCTCACGCTTCTACTAC
 TGTGTCCACAGTACCCGCCATCGAGGCACAGCACTTGCTCAAGAGGAAACCAGATATTGTGACCCCAAT
 GGGCTGAATGTGAAGAAGTTTTCTGCCATGCATGAGTTCCAGAACCTCCATGCTCAGAGCAAGGCTCGAA
 TCCAGGAGTTTGTGCGGGGCCATTTTTATGGGCATCTGGACTTCAACTGGACAAGACCTTATACTTCTT
 TATCGCCGGCCGCTATGAGTTCTCCAACAAGGGTGTGACGTCTTCTGGAGGCATTGGCTCGGCTCAAC
 TATCTGCTCAGAGTGAACGGCAGCGAGCAGACAGTGGTTGCCTTCTTATCATGCCAGCGCGGACCAACA
 ATTTCAACGTGGAAACCCTCAAAGGCCAAGCTGTGCGCAACAGCTTTGGGACACGGCCAACACGGTGAA
 GGAAAAGTTCGGGAGGAAGCTTTATGAATCCTTACTGTTGGGAGCCTTCCCGACATGAACAAGATGCTG
 GATAAGGAAGACTTCACTATGATGAAGAGGCCATCTTTGCAACGCAGCGGCAGTCTTCCCCCTGTGT
 GCACCCACAATATGCTGGATGACTCCTCAGACCCCATCCTGACCACCATCCGCCGAATCGGCCTCTTCAA
 TAGCAGTGCCGACAGGGTGAAGGTGATTTCCACCCGGAGTTCCTCTCCTCCACAAGCCCTGCTCCCT
 GTGGACTATGAGGAGTTTGTCCGTGGCTGTACCTTGGAGTCTTCCCTCCTACTATGAGCCTTGGGGCT
 ACACACCGGCTGAGTGCACGTTATGGGAATCCCAGTATCTCCACCAATCTCTCCGGCTTCGGCTGCTT
 CATGGAGGAACACATCGCAGACCCCTCAGCTTACGGTATCTACATTCTTGACCGGCGTTCCGCAGCCTG
 GATGATTCTGCTCGCAGCTCACCTCCTCCTCTACAGTTTCTGTGAGCAGAGCCGGCGGCAGCGTATCA
 TCCAGCGGAACCGCACGGAGCGCCTCTCCGACCTTCTGGACTGGAATACTAGGCCGGTACTATATGTC
 TGCGCGCCACATGGCGCTGTCCAAGGCCTTTCCAGAGCACTTACCTACGAGCCCAACGAGGCGGATGCG
 GCCCAGGGGTACCGCTACCCACGGCCAGCCTCGGTGCCACCGTCGCCCTCGCTGTACGACACTCCAGCC
 CGCACCAGAGTGAGGACGAGGAGGATCCCCGGAACGGGCCGCTGGAGGAAGACGGCGAGCGCTACGATGA
 GGACGAGGAGGCCGCAAGGACCGGCGCAACATCCGTGCACCAGAGTGGCCGCGCCGAGCGTCTGCACC
 TCCTCCACCAGCGGCAGCAAGCGCAACTCTGTGGACACGGCCACCTCCAGCTCACTCAGCACCCCGAGCG
 AGCCCCCAGCCCCACCGACTCCCTGGGCGAGGAGCGTAAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC200940 protein sequence
 Red=Cloning site Green=Tags(s)

MPLNRTLSSSLPGLLEDWEDEFDLENVLFVAVWEVANKVGGIYTVLQTKAKVTGDEWGDNYFLVGPYTE
 QGVRTQVELLEAPTPALKRTLDSMNSKGCKVYFGRWLEGGPLVLLDVGASAWALERWKGELWDCNIG
 VPWYDREANDAVLFGFLTTFWLGFLAQSEEKPHVVAHFHEWLAGVGLCLCRARRLPVATIFTTTHATLLG
 RYL CAGAVDFYNNLENFNVDKEAGERQIYHRYCMERAAAHCAHVFTTVSQITAIEAQHLLKRKPDIVTPN
 GLNVKKFSAMHEFQNLHAQSKARIQEFVRGHFYGHLDNFNLDKTLYFFIAGRYEFSNKGADVFLAALARN
 YLLRVNGSEQTVVAFFIMPARTNNFNVETLKGQAVRKQLWDTANTVKEKFGKLYESLLVGSLLPDMNKML
 DKEDFTMMKRAIFATQRQSFPPVCTHNMLDDSSDPILTTIRRIGLFNSSADRVKVIHFPEFLSSTSPLLP
 VDYEYFVRGCHLVGFPYYPWGYTPAECTVMGIPSIISTNLSGFGCFMEEHIADPSAYGIYILDRFRSL
 DDSCSQLTSFLYSFCQQSRRQRIIQNRNTERLSDLLDWKYLGRYYMSARHMLSKAFPEHFTYEPNEADA
 AQGYRYRPPASVPPSPSLSRHSSPHQSEDEEDPRNGPLEEDGERYDEDEEAAKDRRNIRAPEWPRRASCT
 SSTSGSKRNSVDTATSSSLSTPSEPLSPTSSLGEERN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6203_a05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_002103

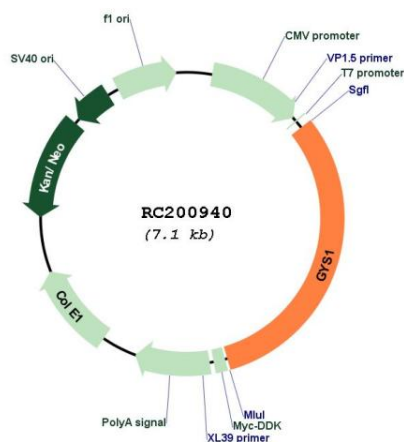
ORF Size: 2211 bp

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](#)

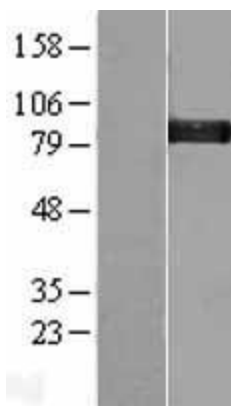
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_002103.5
RefSeq Size:	3635 bp
RefSeq ORF:	2214 bp
Locus ID:	2997
UniProt ID:	P13807
Cytogenetics:	19q13.33
Protein Pathways:	Insulin signaling pathway, Starch and sucrose metabolism
MW:	83.8 kDa
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]

Product images:



Circular map for RC200940



Western blot validation of overexpression lysate (Cat# [LY400769]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200940 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).