

## Product datasheet for **RC210683**

### **PYGL (NM\_002863) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	PYGL (NM_002863) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PYGL
Synonyms:	GSD6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>RC210683 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

ATGGCGAAGCCCTGACGGACCAGGAGAAGCGGCGCAGATCAGCATCCGCGGCATCGTGGGCGTGGAGA  
ACGTGGCAGAGCTGAAGAAGAGTTTCAACCGGCACCTGCACTTACGCTGGTCAAGGACCGCAACGTGGC  
CACCACCCGCGACTACTTTCGCGCTGGCGCACACGGTGCAGCACACCTGGTGGGCGCTGGATCCGC  
ACGCAGCAGCACTACTACGACAAGTGCCCAAGAGGGTATATTACCTCTCTGGAATTTTACATGGGCC  
GAACATTACAGAACCATGATCAACCTCGGTCTGCAAAATGCCTGTGATGAGGCCATTTACCAGCTTGG  
ATTGGATATAGAAGAGTTAGAAGAAATGAAGAAGATGCTGGACTTGGCAATGGTGGTCTTGGGAGACTT  
GCTGCCTGCTTCTGGATTCCATGGCAACCCTGGGACTGCAGCCTATGGATACGGCATTCCGGTATGAAT  
ATGGGATTTTCAATCAGAAGATCCGAGATGGATGGCAGGTAGAAGAAGCAGATGATTGGCTCAGATATGG  
AAACCTTGGGAGAAGTCCCGCCAGAATTCATGCTGCCTGTGCATTCTATGGAAAAGTAGAACACACC  
AACACCGGACCAAGTGGATTGACACTCAAGTGGTCTGGCTCTGCCATATGACACCCCCGTGCCGGCT  
ACATGAATAACACTGTCAACACCATGCGCCTCTGGTCTGCTCGGGCACCAAAATGACTTTAACCTCAGAGA  
CTTTAATGTTGGAGACTACATTCAGGCTGTGCTGGACCGAAACCTGGCCGAGAACATCTCCCGGGTCCCTC  
TATCCCAATGACAATTTTTTGAAGGGAAGGAGCTAAGATTGAAGCAGGAATACTTTGTGGTGGCTGCAA  
CCTTGCAAGATATCATCCGCCGTTTCAAAGCCTCCAAGTTGGCTCCACCCGTGGTGCAGGAACTGTGTT  
TGATGCCTTCCGGATCAGGTGGCCATCCAGCTGAATGACACTCACCTGCCTCGCGATCCCTGAGCTG  
ATGAGGATTTTTTGGATATTGAAAACTGCCCTGGTCCAAGGCATGGGAGCTCACCCAGAAGACCTTCC  
CCTACCAACACACAGTGTCCCGAAGCCCTGGAGCGCTGGCCCGTGGACCTGGTGGAGAAGCTGCTG  
CCCTCGACATTTGGAAATCATTATGAGATAAAATCAGAAGCATTAGATAGAATTTGGCCTTGTTCCT  
AAAGATGTGGACCGTCTGAGAAGGATGTCTGTGATAGAAGAGGAAGGAAGCAAAAGGATCAACATGGCCC  
ATCTCTGCATTGTGCGTCCCATGCTGTGAATGGCGTGGCTAAAACTCACTCAGACATCGTGAAGACTAA  
AGTATTCAAGGACTTCAGTGAGCTAGAACCTGACAAGTTTCAAGATAAAACCAATGGGATCACTCCAAGG  
CGCTGGCTCCTACTCTGCAACCCAGGACTTGCAGAGCTCATAGCAGAGAAAATGGAGAAGACTATGTGA  
AAGACCTGAGCCAGTGACGAAGCTCCACAGCTTCTGGGTGATGATGTCTTCTCCGGAACTCGCCAA  
GGTGAAGCAGGAGAATAAGCTGAAGTTTCTCAGTTCCTGGAGACGGAGTACAAAGTGAAGATCAACCCA  
TCCTCCATGTTTGTGATGTCAGGTGAAGAGGATACATGAGTACAAGCGACAGCTTTGAAGTGTCTGCATG  
TGATCACGATGTACAACCGCATTAAAGAAAGACCCTAAGAAAGTTATTCGTGCCAAGGACAGTTATCATTGG  
TGGTAAAGCTGCCCAAGGATATCACATGGCCAAAATGATCATAAAGCTGATCACTTCAGTGGCAGATGTG  
GTGAACAATGACCCTATGGTTGGAAGCAAGTTGAAAGTCATCTTCTTGGAGAACTACAGAGTATCTCTTG  
CTGAAAAAGTCATTCCAGCCACAGATCTGTGAGAGCAGATTTCCACTGCAGGCACCGAAGCCTCGGGGAC  
AGGCAATATGAAGTTCATGCTAAATGGGGCCCTAACTATCGGGACCATGGATGGGGCCAATGTGGAAATG  
GCAGAAGAAGCTGGGGAAGAGAACCTGTTCATCTTTGGCATGAGGATAGATGATGTGGCTGCTTTGGACA  
AGAAAGGTTACGAGGCAAAAGAACTACTATGAGGCACTTCCAGAGCTGAAGCTGGTATTGATCAAATTGA  
CAATGGCTTTTTTCTCCAAGCAGCCTGACCTTTCAAAGATATCATCAACATGCTATTTTATCATGAC  
AGGTTTTAAAGTCTTTCAGACTACGAAGCCTATGTCAAGTGTCAAGATAAAGTGAAGTCAAGTGTACATGA  
ATCCAAAGGCTGGAAACAATGGTACTCAAAAACATAGCTGCCTCGGGGAAATTTCTCCAGTGACCGAAC  
AATTAAGAATATGCCAAAACATCTGGAACGTGGAACCTTCAGATCTAAAGATTTCTCTATCCAATGAA  
TCTAACAAAGTCAATGAAAT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC210683 protein sequence  
 Red=Cloning site Green=Tags(s)

MAKPLTDQEKRRQISIRGIVGVENVAELKKSFNRLHFTLVKDRNVATTRDYFALAHTVRDHLVGRWIR  
 TQQHYDYKCPKRYYLSEFYMGRTLQNTMINLGLQNACDEAIYQLGLDIEELEEEEDAGLGNGLGRL  
 AACFLDSMATLGLAAYGYGIRYEYGFNQKIRDGWQVEEADDWLRYPGWEKSRPEFMLPVHFYKVEHT  
 NTGKTWIDTQVVLALPYDTPVPGYMNNTVNTMRLWSARAPNDFNLRDFNVGDYIQAVLDRNLAENISRVL  
 YPNDNFEGKELRLKQEYFVVAATLQDIIRRFKASKFGSTRGAGTVDAFPDQVAIQLNDRNLAENISRVL  
 MRIFVDIEKLPWSKAWELTQKTFAYTNHTVLPALERWPVDLVEKLLPRHLEIIEYNQKHLDRIVALFP  
 KDVDRLRRMSLIEEEGSKRINMAHL CIVGSHAVNGVAKIHSDIVKTKVFKDFSELEPKFKQKTNGITPR  
 RWLLLCNPGLAELIAEKIGEDYVKDLSQLTKLHSFLGDDVFLRELAKVKQENKLF SQFLETEYKVINP  
 SSMFDVQVKRIHEYKRQLLNCLHVITMYNRIKKDPKFLVPRTVIIGGKAAPGYHMAKMI IKLITSVADV  
 VNNDPMVSGSKLVIFLENYRVSLAEKVIPATDLSEQISTAGTEASGTGMKFMLNGALTIGTMDGANVEM  
 AEEAGEENLFI FGMRIDDVAALDKKGYEAKYYEALPELKLVIDQIDNGFFSPKQPDFKDIINMLFYHD  
 RFKVFADEAYVKQDKVSQLYMNPKAWNTMVLKNIAASGKSSDRTIKEYAQNIWNVPSDLKISLSNE  
 SNKVNGN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mk6689\\_c03.zip](https://cdn.origene.com/chromatograms/mk6689_c03.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



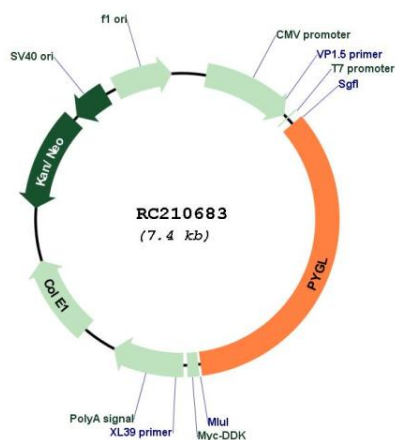
\* The last codon before the Stop codon of the ORF

<b>ACCN:</b>	NM_002863
<b>ORF Size:</b>	2541 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_002863.5</a>
<b>RefSeq Size:</b>	2859 bp
<b>RefSeq ORF:</b>	2544 bp
<b>Locus ID:</b>	5836
<b>UniProt ID:</b>	<a href="#">P06737</a>
<b>Cytogenetics:</b>	14q22.1
<b>Domains:</b>	phosphorylase
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Insulin signaling pathway, Starch and sucrose metabolism
<b>MW:</b>	97.1 kDa

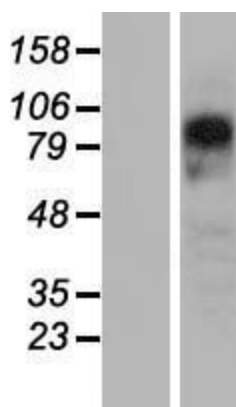
**Gene Summary:**

This gene encodes a homodimeric protein that catalyses the cleavage of alpha-1,4-glucosidic bonds to release glucose-1-phosphate from liver glycogen stores. This protein switches from inactive phosphorylase B to active phosphorylase A by phosphorylation of serine residue 15. Activity of this enzyme is further regulated by multiple allosteric effectors and hormonal controls. Humans have three glycogen phosphorylase genes that encode distinct isozymes that are primarily expressed in liver, brain and muscle, respectively. The liver isozyme serves the glycemic demands of the body in general while the brain and muscle isozymes supply just those tissues. In glycogen storage disease type VI, also known as Hers disease, mutations in liver glycogen phosphorylase inhibit the conversion of glycogen to glucose and results in moderate hypoglycemia, mild ketosis, growth retardation and hepatomegaly. Alternative splicing results in multiple transcript variants encoding different isoforms.[provided by RefSeq, Feb 2011]

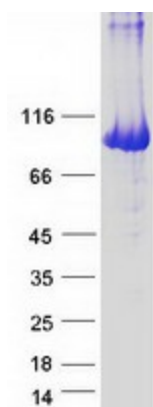
**Product images:**



Circular map for RC210683



Western blot validation of overexpression lysate (Cat# [LY419056]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210683 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PYGL protein (Cat# [TP310683]). The protein was produced from HEK293T cells transfected with PYGL cDNA clone (Cat# RC210683) using MegaTran 2.0 (Cat# [TT210002]).