

## Product datasheet for **RG200702**

### **PFKM (NM\_000289) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	PFKM (NM_000289) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PFKM
Synonyms:	ATP-PFK; GSD7; PFK-1; PFK-A; PFK1; PFKA; PFKX; PPP1R122
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide  
Sequence:

>RG200702 representing NM\_000289  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGACCCATGAAGAGCACCATGCAGCCAAAACCTGGGGATTGGCAAAGCCATTGCTGTCTTAACCTCTG  
 GTGGAGATGCCCAAGGTATGAATGCTGCTGTCAGGGCTGTGGTTCGAGTTGGTATCTTCACCGGTGCCCG  
 TGTCTTCTTTGTCCATGAGGGTTATCAAGGCTGGTGGATGGTGGAGATCACATCAAGGAAGCCACCTGG  
 GAGAGCGTTTCGATGATGCTTCAGCTGGGAGGCACGGTATTGGAAGTCCCGGTGCAAGGACTTTCGGG  
 AACGAGAAGGACGACTCCGAGCTGCCTACAACCTGGTGAAGCGTGGGATCACCAATCTCTGTGCATTGG  
 GGGTATGGCAGCCTCACTGGGGCTGACACCTCCGTTCTGAGTGGAGTGACTTGTGAGTGACCTCCAG  
 AAAGCAGTAAGATCACAGATGAGGAGGCTACGAAGTCCAGCTACCTGAACATTGTGGCCCTGGTTGGGT  
 CAATTGACAATGACTTCTGTGGCACCATATGACCATTGGCACTGACTCTGCCCTGCATCGGATCATGGA  
 AATTGTAGATGCCATCACTACCACTGCCAGAGCCACCAGAGGACATTTGTGTTAGAAGTAAATGGGCCGC  
 CACTGTGGATACCTGGCCCTTGTACCTCTCTGTCTGTGGGGCCGACTGGGTTTTATTCTGAATGTC  
 CACCAGATGACGACTGGGAGGAACACCTTTGTCGCCGACTCAGCGAGACAAGGACCCGTGGTTCTCGTCT  
 CAACATCATATTGTGGCTGAGGGTGAATTGACAAGAATGGAACCAATCACCTCAGAAGACATCAAG  
 AATCTGGTGGTTAAGCGTCTGGGATATGACACCCGGGTTACTGTCTTGGGCGATGTGCAGAGGGGTGGGA  
 CGCCATCAGCCTTTGACAGAATTCTGGGACGAGGATGGGTGTGGAAGCAGTGTGGCACTTTTGGAGGG  
 GACCCAGATACCCAGCCTGTGTAGTGAAGCCTCTCTGGTAACCAAGGCTGTGCGCCTGCCCTCATGGAA  
 TGTGTCCAGGTGACCAAGATGTGACCAAGGCCATGGATGAGAAGAAATTTGACGAAGCCCTGAAGCTGA  
 GAGGCCGAGCTTCATGAACAACCTGGGAGGTGTACAAGCTTCTAGCTCATGTCAGACCCCGGTATCTAA  
 GAGTGGTTCGCACACAGTGGCTGTGATGAACGTGGGGCTCCGGCTGCAGGCATGAATGCTGCTGTTCCG  
 TCCACTGTGAGGATTGGCCTTATCCAGGGCAACCGAGTGTCTCGTTGTCCATGATGGTTTCGAGGGCTGG  
 CCAAGGGGCAGATAGAGGAAGCTGGCTGGAGCTATGTTGGGGGCTGGACTGGCCAAGGTGGCTCTAAACT  
 TGGGACTAAAAGGACTCTACCAAGAAGAGCTTTGAACAGATCAGTGCCAATATAACTAAGTTTAACTT  
 CAGGGCCTTGTATCATTGGGGCTTTGAGGCTTACACAGGGGGCTGGAAGTGTGGAGGGCAGGAAGC  
 AGTTTGTGAGCTCTGCATCCCATTGTGGTCACTCTGCTACAGTCTCCAACAATGTCCCTGGCTCAGA  
 CTTGAGCGTTGGGGCTGACACAGCACTCAATACTATCTGCACAACCTGTGACCGCATCAAGCAGTCAGCA  
 GCTGGCACAAGCGTCGGGTGTTTATCATTGAGACTATGGGTGGCTACTGTGGCTACCTGGCTACCATGG  
 CTGGACTGGCAGCTGGGGCCGATGCTGCCTACATTTTTGAGGAGCCCTTACCATTTCGAGACCTGCAGGC  
 AAATGTTGAACATCTGGTGCAAAAGATGAAAACAACCTGTGAAAAGGGGCTTGGTGTAAAGGAATGAAAAG  
 TGCAATGAGAAGTATACCACTGACTTCATTTTCAACCTGTACTCTGAGGAGGGGAAGGGCATCTTCGACA  
 GCAGGAAGAATGTGCTTGGTACATGCAGCAGGGTGGGAGCCCAACCCATTTGATAGGAATTTGCCAC  
 TAAGATGGGCGCCAAGGCTATGAACTGGATGTCTGGGAAAATCAAAGAGAGTTACCGTAATGGGCGGATC  
 TTTGCCAATACTCCAGATTGGGGCTGTGTTCTGGGGATGCGTAAGAGGGCTCTGGTCTTCCAACCAAGTGG  
 CTGAGCTGAAGGACCAGACAGATTTTGTGATCGAATCCCAAGGAACAGTGGTGGCTGAACTGAGGCC  
 CATCCTCAAATCCTAGCCAAGTACGAGATTGACTTGGACACTTCAGACCATGCCACCTGGAGCACATC  
 ACCCGGAAGCGGTCCGGGAAGCTGCCGTC

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG200702 representing NM\_000289  
 Red=Cloning site Green=Tags(s)

MTHEEHHAAKTLGIGKIAVLTSGGDAQGMNAAVRAVVRVGI FTGARVFFVHEGYQGLVDGGDHIKEATW  
 ESVSMMLQLGGTVIGSARCKDFRERERGLRAAYNLVKRGITNL CVIGGDGSLTGADTFRSEWSDLLSDLQ  
 KAGKITDEEATKSSYLNIVGLVGSIDNDFCGTDMTIGTDSALHRIMEIVDAITTTAQSHQRTFVLEV MGR  
 HCGYLALVTSLSGADWVFIPECPPDDDWEEHLCRRLSETRTRGSR LNIIVAEGAIDKNGKPITSEDIK  
 NLVVKRLGYDTRVTVLGHVQRGGTSPAFDRILGSRMGVEAVMALLEGTPDTPACVVVSLSGNQAVRLPLME  
 CVQVTKDVTKAMDEKKFDEALKLRGRSFMNNWEVYKLLAHVRPPVSKSGSHTVAVMNVGAPAAGMNAAVR  
 STVRIGLIQGNRVLVVDHGFELAKGQIEEAGWSYVGGWTQGGSKLGT KRTLPKKSFEQISANITKFNI  
 QGLVIIGGFEAYTGGLELMEGRKQFDEL CIPFVVIPATVSNNVPGSDF SVGADTALNTICTTCDRIKQSA  
 AGTKRRVFI IETMGGYCYLATMAGLAAGADAAYIFEFPFTIRD LQANVEHLVQKMKTTVKRGLVLRNEK  
 CNENYTTDFIFNLYSEEGKIFDSRKNVLGHMQGGSP TPFDRNFATKMGAKAMNWM SGIKESYRNGRI  
 FANTPDSGCVLGMRKRALVFQPAELKDQTD FEHRIPKEQWLLKLRPILKILAKYEIDLDTSDHAHLEHI  
 TRKRSGEAAV

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



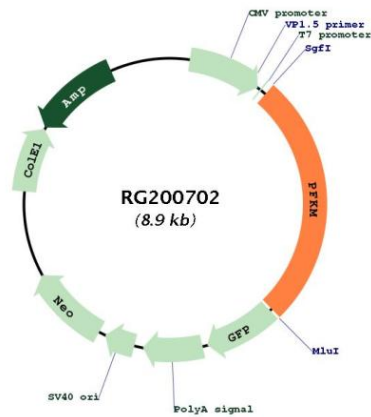
ACCN: NM\_000289

ORF Size: 2340 bp

<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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></p>
<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_000289.6</a>
<b>RefSeq Size:</b>	2812 bp
<b>RefSeq ORF:</b>	2343 bp
<b>Locus ID:</b>	5213
<b>UniProt ID:</b>	<a href="#">P08237</a>
<b>Cytogenetics:</b>	12q13.11
<b>Domains:</b>	PFK
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Fructose and mannose metabolism, Galactose metabolism, Glycolysis / Gluconeogenesis, Metabolic pathways, Pentose phosphate pathway

**Gene Summary:**

Three phosphofructokinase isozymes exist in humans: muscle, liver and platelet. These isozymes function as subunits of the mammalian tetramer phosphofructokinase, which catalyzes the phosphorylation of fructose-6-phosphate to fructose-1,6-bisphosphate. Tetramer composition varies depending on tissue type. This gene encodes the muscle-type isozyme. Mutations in this gene have been associated with glycogen storage disease type VII, also known as Tarui disease. Alternatively spliced transcript variants have been described. [provided by RefSeq, Nov 2009]

**Product images:**

Circular map for RG200702