

## Product datasheet for **SC320270**

### PFKM (NM\_000289) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PFKM (NM_000289) Human Untagged Clone
Tag:	Tag Free
Symbol:	PFKM
Synonyms:	ATP-PFK; GSD7; PFK-1; PFK-A; PFK1; PFKA; PFKX; PPP1R122
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene sequence for NM\_000289.3  
 CTAAGAGAGTGGATCATGACCCATGAAGAGCACCATGCAGCCAAAACCTGGGGATTGGC  
 AAAGCCATTGCTGTCTTAACCTCTGGTGGAGATGCCCAAGGTATGAATGCTGCTGCAGG  
 GCTGTGGTTCGAGTTGGTATCTTACCAGGTGCCCGTGTCTTCTTTGTCCATGAGGGTTAT  
 CAAGGCCTGGTGGATGGTGGAGATCACATCAAGGAAGCCACCTGGGAGAGCGTTTCGATG  
 ATGCTTCAGCTGGGAGGCACGGTATTGGAAGTGCCCGGTGCAAGGACTTTCGGGAACGA  
 GAAGGACGACTCCGAGCTGCCTACAACCTGGTGAAGCGTGGGATACCAATCTCTGTGTC  
 ATTGGGGGTGATGGCAGCCTCACTGGGGCTGACACCTTCCGTTCTGAGTGGAGTGACTTG  
 TTGAGTGACCTCCAGAAAGCAGGTAAGATCACAGATGAGGAGGCTACGAAGTCCAGCTAC  
 CTGAACATTGTGGGCCTGGTTGGGTCAATTGACAAATGACTTCTGTGGCACCAGATGACC  
 ATTGGCACTGACTCTGCCCTGCATCGGATCATGGAAATGTAGATGCCATCACTACCACT  
 GCCCAGAGCCACCAGAGGACATTTGTGTTAGAAGTAATGGGCCGCCACTGTGGATACCTG  
 GCCCTTGCACCTCTCTGTCTGTGGGGCCGACTGGGTTTTTATCCTGAATGCCACCA  
 GATGACGACTGGGAGGAACCTTTGTGCGCGACTCAGCGAGACAAGACCCGTGGTTCT  
 CGTCTCAACATCATCATTGTGGCTGAGGGTGAATTGACAAGAATGGAAAACCAATCACC  
 TCAGAAGACATCAAGAATCTGGTGGTTAAGCGTCTGGGATATGACACCCGGTACTGTC  
 TTGGGGCATGTGCAGAGGGGTGGGACGCCATCAGCCTTTGACAGAATTCTGGGCAGCAGG  
 ATGGGTGTGGAAGCAGTATGGCACTTTTGGAGGGGACCCAGATACCCAGCCTGTGTA  
 GTGAGCCTCTCTGGTAACCAGGCTGTGCGCCTGCCCTCATGGAATGTGTCCAGGTGACC  
 AAAGATGTGACCAAGGCCATGGATGAGAAGAAATTTGACGAAGCCCTGAAGCTGAGAGGC  
 CGGAGCTTCATGAACAACCTGGGAGGTGTACAAGCTTAGCTCATGTGACACCCCGGTA  
 TCTAAGAGTGGTTCGCACACAGTGGCTGTGATGAACGTGGGGGCTCCGGCTGCAGGCATG  
 AATGCTGCTGTTGCTCCACTGTGAGGATTGGCCTTATCCAGGGCAACCGAGTGCCTGTT  
 GTCATGATGGTTTCGAGGGCCTGGCCAAGGGGAGATAGAGGAAGCTGGCTGGAGCTAT  
 GTTGGGGGCTGGACTGGCCAAGGTGGCTCTAAACTTGGGACTAAAAGGACTCTACCCAAG  
 AAGAGCTTTGAACAGATCAGTGCCAATATAACTAAGTTTAAACATTCAGGGCCTTGTGATC  
 ATTGGGGGCTTTGAGGCTTACACAGGGGGCCTGGAAGTATGGAGGGCAGGAAGCAGTTT  
 GATGAGCTCTGCATCCCATTGTGGTATTCTGCTACAGTCTCCAACAATGTCCCTGGC  
 TCAGACTTCAGCGTTGGGGCTGACACAGCACTCAATACTATCTGCACAACCTGTGACCGC  
 ATCAAGCAGTCAGCAGCTGGCACCAAGCGTCGGGTGTTTATCATTGAGACTATGGGTGGC  
 TACTGTGGCTACCTGGCTACCATGGCTGGACTGGCAGCTGGGGCCGATGTGCCTACATT  
 TTTGAGGAGCCCTTACCATTGAGACCTGCAGGCAAATGTTGAACATCTGGTGCAAAAAG  
 ATGAAAACAACCTGTGAAAAGGGGCTTGGTGTAAAGGAATGAAAAGTGAATGAGAATAT  
 ACCACTGACTTCAATTTCAACCTGTACTCTGAGGAGGGGAAGGGCATCTTCGACAGCAGG  
 AAGAATGTGCTTGGTCACATGCAGCAGGGTGGGAGCCCAACCCATTTGATAGGAATTTT  
 GCCACTAAGATGGGGCCCAAGGCTATGAACTGGATGTCTGGGAAAATCAAAGAGAGTTAC  
 CGTAATGGGCGGATCTTTGCCAATACTCCAGATTGGGGCTGTGTTCTGGGGATGCGTAAG  
 AGGGCTCTGGTCTTCAACCAAGTGGCTGAGCTGAAGACCAGACAGATTTTGGCATCGA  
 ATCCCAAGGAACAGTGGTGGCTGAAACTGAGGCCCATCTCAAATCCTAGCCAAGTAC  
 GAGATTGACTTGGACACTTCAGACCATGCCACCTGGAGCACATACCCGGAAGCGGTCC  
 GGGGAAGCTGCCGTCTAAACCTCTCTGGAGTGGGGGAATAGATTACCTGATCATGGTCA  
 GCTCACACCCTAATAAGTCCACATCTTCTCAGTGTTTTAGCTGTTTTTTTATTAGGTTT  
 CCTTTTATTCTGTACTTGCAGCCATGACCAGTTCTGGCCAGGAGCTGGAGGAGCAGGCA  
 GTGGGTGGGAGCTCCTTTTAGGTAGAATTTAACATGACTTCTGCCCCAGCTTTTACTGTC  
 ACACAAGGCTGGGCACCTCTAGTGTACTGCTAGATATCACTTACTCAGTTAGAATTTTC  
 CTAATAAAGCTTTATTTATTTCTTTGTGATAACAAAGAGTCTTGGTTCCTCTACTACT  
 TTTACTACAGTGACAAATGTAACACTACTAATAAATGCCAACTGGTCACTGTGAAAAAA  
 AA

**Restriction Sites:** Please inquire  
**ACCN:** NM\_000289

**OTI Disclaimer:** 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 [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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 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\\_000289.3](#), [NP\\_000280.1](#)

**RefSeq Size:** 2812 bp

**RefSeq ORF:** 2343 bp

**Locus ID:** 5213

**UniProt ID:** [P08237](#)

**Cytogenetics:** 12q13.11

**Domains:** PFK

**Protein Families:** Druggable Genome

**Protein Pathways:** 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]

Transcript Variant: This variant (4, also known as type C) differs in the 5' UTR, lacks a portion of the 5' coding region, and initiates translation at a downstream start codon, compared to variant 1. The encoded isoform (2) is shorter than isoform 1. Variants 2, 3, 4, 12, 13, and 14 encode the same isoform (2).