

Product datasheet for **RC238738**

Glucose 6 phosphate isomerase (GPI) (NM_001289790) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glucose 6 phosphate isomerase (GPI) (NM_001289790) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GPI
Synonyms:	AMF; GNPI; NLK; PGI; PHI; SA-36; SA36
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>RC238738 representing NM_001289790
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCGCTCTCACCCGGGACCCCAAGTCCAGAAGTGCAGCAATGGTACCGCGAGCACCGCTCCGAGC
 TGAACCTGCGCCGCTCTTCGATGCCAACAAAGGACCGCTTCAACCACTTCAGCTTGACCCCTAACACCAA
 CCATGGGCATATCCTGGTGGATTACTCCAAGAACCTGGTACGGAGGACGTGATGCGGATGCTGGTGGAC
 TTGGCCAAGTCCAGGGCGTGGAGGCCGCCGGGAGCGGATGTTCAATGGTGAAGAATCAACTACCCG
 AGGGTCGAGCCGTGCTGCACGTGGCTCTGCGGAACCGGTCAAACACACCCATCCTGGTAGACGGCAAGGA
 TGTGATGCCAGAGGTCAACAAGTTCTGGACAAGATGAAGTCTTCTGCCAGGGACCCCTCATGGTACT
 GAAGCCCTTAAGCCATACTCTTCAGGAGTCCCGCGTCTGGTATGTCTCAACATTGATGGAACCTCACA
 TTGCCAAAACCTGGCCAGCTGAACCCGAGTCTCCCTGTTTCATCATTGCCTCAAGACCTTTACTAC
 CCAGGAGACCATCACGAATGCAGAGACGGCGAAGGAGTGGTTTCTCCAGGCGCCAAGGATCCTTCTGCA
 GTGGCGAAGCACTTTGTTGCCCTGTCTACTAACACAACCAAAAGTGAAGGAGTTTGGAAATGACCCTCAA
 ACATGTTTCGAGTTCTGGGATTGGTGGGAGGACGCTACTCGTGTGGTCCGCCATCGGACTCTCCATTGC
 CCTGCACGTGGGTTTTGACAACCTTCGAGCAGTCTCTCGGGGGCTCACTGGATGGACCAGCACTCCCGC
 ACGACGCCCTGGAGAAGAAGCCCGCTTGTCTGGCCCTGCTGGGATCTGGTACATCAACTGCTTTG
 GGTGTGAGACACACGCCATGCTGCCCTATGACCAGTACCTGCACCGCTTTGCTGCGTACTCCAGCAGGG
 CGCATGGAGTCCAATGGGAAATACATCACAAATCTGGAACCGTGTGGACCACCAGACAGGCCCCATT
 GTGTGGGGGAGCCAGGGACCAATGGCCAGCATGCTTTTTACCAGCTCATCCACAAGGCCACCAAGATGA
 TACCCTGTGACTTCCTCATCCCGTCCAGACCCAGCACCACATACGGAAGGGTCTGCATCACAAGATCTC
 CTGGCCAACTTCTTGGCCAGACAGAGCCCTGATGAGGGGAAAATCGACGGAGGAGGCCCGAAAGGAG
 CTCCAGGCTGCGGGCAAGAGTCCAGAGGACCTTGAAGGCTGCTGCCACATAAAGTCTTTGAAGGAAATC
 GCCCAACCAACTTATTGTGTTCAACAAGTCTCACACCTCATGCTTGGAGCCTTGGTCCGCATGTATGA
 GCACAAGATCTTCGTTCAAGGCATCATCTGGGACATCAACAGCTTTGACCAGTGGGGAGTGGAGCTGGGA
 AAGCAGCTGGCTAAGAAAATAGAGCCTGAGCTTGATGGCAGTGTCAAGTACCTCTCACGACGCTTCTA
 CCAATGGGCTCATCAACTTCATCAAGCAGCAGCGGAGGCCAGAGTCCAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC238738 representing NM_001289790
 Red=Cloning site Green=Tags(s)

MAALTRDPQFQKLQQWYREHRSELNLRRLFDANKDRFNHFSLLTNTNHGHILVDYSKNLVTEDVMRMLVD
 LAKSRGVEAARERMFNGEKINYTEGRAVLHVALRNRSNTPILVDGKDVMPVNVKVLDMKSFCQGPLMVT
 EALKPYSSGGPRVWYVSNIDGTHIAKTLAQLNPESSLFIIASKFTTQETITNAETAKEWFLQAAKDPSA
 VAKHFVALSTNTTKVKEFGIDPQNMFEFWDWVGGRYSLWSAIGLSIALHVGFDFEQLLSGAHWMDQHFR
 TTPLEKNAPVLLALLGIWYINCFGCETHAMLPYDQYLHRFAAYFQQGDMESNGKYITKSGTRVDHQTGPI
 VWGEPGTNGQHAFYQLIHQGTKMIPCDFLIPVQTQHPHRLKGLHHKILLANFLAQTEALMRGKSTEEARKE
 LQAAGKSPEDLERLLPHKVFEGNRPTNSIVFTKLTTPFMLGALVAMYEHKIFVQGI IWDINSFDQWGVELG
 KQLAKKIEPELDGSAQVTSHDASTNGLINFIKQQREARVQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

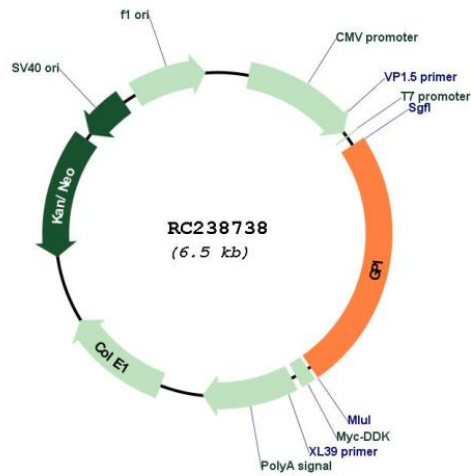
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_001289790
ORF Size:	1590 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.
RefSeq:	NM_001289790.3
RefSeq Size:	4125 bp
RefSeq ORF:	1593 bp
Locus ID:	2821
Cytogenetics:	19q13.11
Protein Families:	Druggable Genome
Protein Pathways:	Amino sugar and nucleotide sugar metabolism, Glycolysis / Gluconeogenesis, Metabolic pathways, Pentose phosphate pathway, Starch and sucrose metabolism
MW:	60.6 kDa

Gene Summary:

This gene encodes a member of the glucose phosphate isomerase protein family. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. In the cytoplasm, the gene product functions as a glycolytic enzyme (glucose-6-phosphate isomerase) that interconverts glucose-6-phosphate and fructose-6-phosphate. Extracellularly, the encoded protein (also referred to as neuroleukin) functions as a neurotrophic factor that promotes survival of skeletal motor neurons and sensory neurons, and as a lymphokine that induces immunoglobulin secretion. The encoded protein is also referred to as autocrine motility factor based on an additional function as a tumor-secreted cytokine and angiogenic factor. Defects in this gene are the cause of nonspherocytic hemolytic anemia and a severe enzyme deficiency can be associated with hydrops fetalis, immediate neonatal death and neurological impairment. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2016]