

Product datasheet for **RC239035**

Glucose 6 phosphate isomerase (GPI) (NM_001289789) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glucose 6 phosphate isomerase (GPI) (NM_001289789) 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:

>RC239035 representing NM_001289789
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGTAGCTCTCTGCAGCCTCCAACACCTGGGCTCCAGTGATCCCCGGGCTCTGCCACCCTCCCCACTG
 CCACTTCCGGGCAGAGGCCAGCAAAAGCGGCGCGCAAGAGTCCCGCCATGGCCGCTCTACCCGGGACCC
 CCAGTTCAGAAGCTGCAGCAATGGTACCGCGAGCACCGCTCCGAGCTGAACCTGCGCCGCTCTTCGAT
 GCCAACAAAGGACCGCTTCAACCACTTCACTTACCCCTCAACACCAACCATGGGCATATCCTGGTGGATT
 ACTCCAAGAACCTGGTGACGGAGGACGTGATGCGGATGCTGGTGGACTTGGCCAAGTCCAGGGGCGTGGA
 GGCCGCCCGGGAGCGGATGTTCAATGGTGAAGAATCACTACACCGAGGGTTCGAGCCGCTGTCACGTG
 GCTCTGCGGAACCGGTCAAACACACCCATCCTGGTAGACGGCAAGGATGTGATGCCAGAGGTCAACAAGG
 TTCTGGACAAGATGAAGTCTTCTGCCAGCGTGTCCGGAGCGGTACTGGAAGGGGTACACAGGCAAGAC
 CATCACGGACGTCAACATTGGCATTGGCGGCTCCGACCTGGGACCCCTCATGGTACTGAAGCCCTT
 AAGCCATACTCTCAGGAGGTCCCCGCGTCTGGTATGTCTCCAACATTGATGGAACCTCACATTGCCAAAA
 CCCTGGCCAGCTGAACCCGAGTCTCCCTGTTTCATCATTGCCTCCAAGACCTTACTACCCAGGAGAC
 CATCACGAATGCAGAGACGGCGAAGGAGTGGTTTCTCCAGGCGGCCAAGGATCCTTCTGCAGTGGCGAAG
 CACTTTGTTGCCCTGTCTACTAACACAACCAAAGTGAAGGAGTTTGAATTGACCCTCAAAAATGTTTCG
 AGTTCTGGGATTGGGTGGGAGGACGCTACTCGTGTGGTCCGACTCGGACTCTCCATTGCCCTGCACGT
 GGGTTTGGACAATTGAGCAGCTGCTCTCGGGGCTCACTGGATGGACCAGCACTTCCGCACGACGCCC
 CTGGAGAAGAACGCCCGTCTTGTGGCCCTGCTGGGTATCTGGTACATCAACTGCTTTGGGTGTGAGA
 CACACGCCATGCTGCCCTATGACCAGTACCTGCACCGCTTGTGCTGCGTACTTCCAGCAGGCGACATGGA
 GTCCAATGGGAAAATACATCACCAAATCTGGAACCGTGTGGACCACAGACAGGCCCCATTGTGTGGGG
 GAGCCAGGACCAATGGCCAGCATGCTTTTTACCAGCTCATCCACCAAGGCACCAAGATGATACCTGTG
 ACTTCTCATCCCGTCCAGACCCAGCACCCCATACGGAAGGCTGTCATCACAAGATCCTCCTGGCCAA
 CTTCTTGGCCAGACAGAGGCCCTGATGAGGGGAAAATCGACGGAGGAGGCCGAAAGGAGCTCCAGGCT
 GCGGGCAAGAGTCCAGAGGACCTTGAGAGGCTGCTGCCACATAAGGTCTTGAAGGAAAATCGCCAAACCA
 ACTCTATTGTGTTACCAAGCTCACACCATTATGCTTGGAGCCTTGGTCCCATGTATGAGCACAAGAT
 CTTCTGTTAGGGCATCATCTGGACATCAACAGCTTGGACAGTGGGAGTGGAGCTGGGAAAGCAGCTG
 GCTAAGAAAATAGAGCCTGAGCTTGTGTCAGTGTCAAGTGACCTCTCACGACGCTTACCAATGGGC
 TCATCAACTTCATCAAGCAGCAGCGGAGGCCAGAGTCCAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC239035 representing NM_001289789
 Red=Cloning site Green=Tags(s)

MVALCSLQHLGSSDPRALPTLPTATSGQRPAKRRRKSPAMAALTRDPQFQKLQWYREHRSELNLRRLFD
 ANKDRFNHFSLTLNTHGHILVDYSKNLVTEDVMRMLVDLAKSRGVEAARERMFNGEKINYTEGRAVLHV
 ALRNRSNTPILVDGKDVMPVKNVLDKMKSFQVRVSGDWKGYTGKTITDVINIGIGGSDLGPLMVTEAL
 KPYSSGGPRVWVYSNIDGTHIAKTLAQLNPESLFIASKTFTTQETITNAETAKEWFLQAAKDPSAVAK
 HFVALSTNTTKVKEFGIDPQNMFEFWDWVGGRYSLWSAIGLSIALHVGFDFEQLLSGAHWMDQHFRTTP
 LEKNAPVLLALLGIWYINCFGCETHAMLPYDQYLHRFAAYFQQGDME SNGKYITKSGTRVDHQTGPVWG
 EPGTNGQHAFYQLIHQGTKMIPCDFLIPVQTQHPIRKGLHHKILLANFLAQTEALMRGKSTEEARKELQA
 AGKSPEDLERLLPHKVFEGNRPTNSIVFTKLTPFMLGALVAMYEHKIFVQGI IWDINSFDQWGVELGKQL
 AKKIEPELDGSAQVTSHDASTNGLINFIKQQREARVQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

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_001289789.1 , NP_001276718.1
RefSeq Size:	4356 bp
RefSeq ORF:	1794 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:	67.7 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]