

Product datasheet for **RC230292**

Glucose 6 phosphate isomerase (GPI) (NM_001184722) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glucose 6 phosphate isomerase (GPI) (NM_001184722) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Glucose 6 phosphate isomerase
Synonyms:	AMF; GNPI; NLK; PGI; PHI; SA-36; SA36
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC230292 representing NM_001184722
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGCATCGCC

ATGGTAGTCTCTGCAGCCTCCAACACCTGGGCTCCAGTGATCCCCGGGCTCTGCCACCCTCCCCACTG
 CCACTTCCGGGCAGAGGCCAGCAAAGCGGGCGCAAGAGTCCCGCCATGGCCGCTCTACCCGGGACCC
 CCAAGTCCAGAAGCTGCAGCAATGGTACCGCGAGCACCGCTCCGAGCTGAACCTGCGCCGCTCTTCGAT
 GCCAACAAAGGACCGCTTCAACCACTTCACTTACCCCTCAACACCAACCATGGGCATATCCTGGTGGATT
 ACTCCAAGAACCTGGTGACGGAGGACGTGATGCGGATGCTGGTGGACTTGGCCAAGTCCAGGGGCGTGGA
 GGCCGCCCGGGAGCGGATGTTCAATGGTGAAGAATCACTACACCGAGGGTTCGAGCCGCTGTCACGTG
 GCTCTGCGGAACCGGTCAAACACACCCATCCTGGTAGACGGCAAGGATGTGATGCCAGAGGTCAACAAGG
 TTCTGGACAAGATGAAGTCTTCTGCCAGGACCCCTCATGGTACTGAAGCCCTTAAGCCATACTTTC
 AGGAGGTCCCCGCGTCTGGTATGTCTCCAACATTGATGGAACACATTGCCAAAACCTGGCCAGCTG
 AACCCCGAGTCTCCCTGTTTCATATTGCTCCAGACCTTTACTACCCAGGAGACCATACGAATGCAG
 AGACGGCGAAGGAGTGGTTTCTCCAGGCGGCAAGGATCCTTCTGCAGTGGCGAAGCACTTTGTTGCCCT
 GTCTACTAACACAACAAAGTGAAGGAGTTTGAATTGACCCTCAAAACATGTTTCGAGTTCTGGGATTGG
 GTGGGAGGACGCTACTCGCTGTGGTTCGGCCATCGGACTCTCCATTGCCCTGCACGTGGGTTTTGACAACT
 TCGAGCAGCTGCTCTCGGGGCTCACTGGATGGACCAGCACTCCGCACGACGCCCTGGAGAAGAACGC
 CCCCCTTGTGGCCCTGCTGGGTATCTGGTACATCACTGCTTTGGGTGTGAGACACACGCCATGCTG
 CCTATGACCAGTACCTGCACCGCTTTGCTGCTACTTCCAGCAGGGCGACATGGAGTCCAATGGGAAAT
 ACATACCAAATCTGGAACCCGTGTGGACCACAGACAGGCCCATTTGTGTGGGGGACGACGGGACCAA
 TGGCCAGCATGCTTTTTACCAGCTCATCCACCAAGGCACCAAGATGATACCCTGTGACTTCTCATCCCG
 GTCCAGACCCAGCACCCATACGGAAGGTCTGCATCACAAAGATCCTCCTGGCCAACTTCTTGGCCAGA
 CAGAGGCCCTGATGAGGGGAAAATCGACGGAGGAGGCCGAAAGGAGCTCCAGGCTGCGGGCAAGAGTCC
 AGAGGACCTTGAGAGGCTGCTGCCACATAAGGTCTTTGAAGGAAATCGCCCAACCAACTCTATTGTGTT
 ACCAAGCTCACACCATTGCTTGGAGCCTTGGTCGCCATGTATGAGCACAAGATCTTCGTTTCAGGGCA
 TCATCTGGGACATCAACAGCTTTGACCAGTGGGAGTGGAGCTGGGAAAGCAGCTGGCTAAGAAAATAGA
 GCCTGAGCTTGATGGCAGTGTCAAGTACCTCTCACGACGCTTCTACCAATGGGCTCATCAACTTCATC
 AAGCAGCAGCGGAGGCCAGAGTCCAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC230292 representing NM_001184722
 Red=Cloning site Green=Tags(s)

MVALCSLQHLGSSDPRALPTLPTATSGQRPARRRSPAMAALTRDPQFQKLQQWYREHSELNLRRLFD
 ANKDRFNHFSLLNTNHHGILVDYSKNLVTEDEVMLVLDLAKSRGVEAARERMFNGEKINYTEGRAVLHV
 ALRNRSNTPILVDGKDVMPVNVLDKMKSFQGPLMVTEALKPYSGGPRVWVYVSNIDGTHIAKTLAQL
 NPESLFIASKTFTTQETITNAETAKEWFLQAAKDPSAVAKHFVALSTNTTKVKEFGIDPQNMFEFWDW
 VGGRYLSWSAIGLSIALHVGFDFEQLLSGAHWMDQHFRTTPEKNAPVLLALLGIWYINCFGCETHAML
 PYDQYLHRFAAYFQQGDMESNGKYITKSGTRVDHQTGPIVWGEPTNGQHAFYQLIHQGTKMIPCDFLIP
 VQTQHPIRKGLHHKILLANFLAQTEALMRGKSTEEARKELQAAGKSPEDLERLLPHKVFEGNRPTNSIVF
 TKLTPFMLGALVAMYEHKIFVQGIWIDINSFDQWGVELGKQLAKKIEPELDGSAQVTSHDASTNGLINFI
 KQQREARVQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk8067_g02.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



ACCN: NM_001184722

ORF Size: 1707 bp

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 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](#)

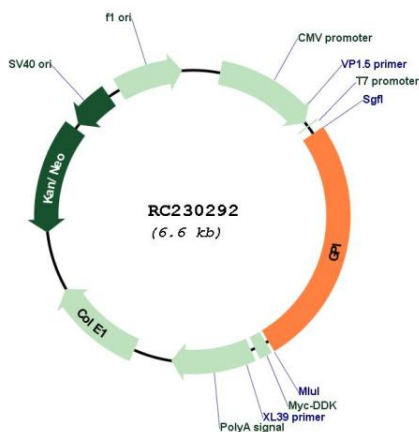
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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).

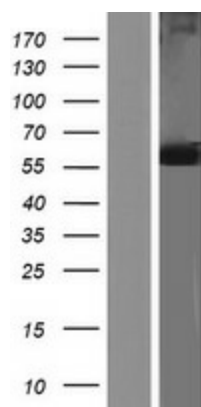
- Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid 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_001184722.1 , NP_001171651.1
RefSeq ORF:	1710 bp
Locus ID:	2821
UniProt ID:	P06744
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:	64.8 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]

Product images:



Circular map for RC230292



Western blot validation of overexpression lysate (Cat# [LY433292]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC230292 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).