

Product datasheet for **RC231973**

glucose 6 phosphatase, catalytic subunit (G6PC) (NM_001270397) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: glucose 6 phosphatase, catalytic subunit (G6PC) (NM_001270397) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: G6PC1
Synonyms: G6Pase; G6PC; G6PT; GSD1; GSD1a
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RC231973 representing NM_001270397
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGGAGGAAGGAATGAATGTTCTCCATGACTTTGGGATCCAGTCAACACATTACCTCCAGGTGAATTACC
AAGACTCCAGGACTGGTTCATCTTGGTGTCCGTGATCGCAGACCTCAGGAATGCCTTCTACGTCCTCTT
CCCCATCTGGTTCATCTTCAGGAAGCTGTGGCATAAACTCCTTTGGGTAGCTGTGATTGGAGACTGG
CTCAACCTCGTCTTTAAGTGGATTCTCTTTGGACAGCGTCCATACTGGTGGGTTTTGGATACTGACTACT
ACAGCAACACTTCCGTGCCCTGATAAAGCAGTTCCTGTAACTGTGAGACTGGACCAGGAAAGATAA
AGCCGACCTACAGATTCGGTGTCTGAATGTCATTTTGTGGTGGGATTCTGGGCTGTGCAGCTGAATGT
CTGTCTGTACGAATCTACCTTGCTGCTCATTTTCTCATCAAGTTGTTGCTGGAGTCTGTCCAGGCATT
GCTGTTGCAGAACTTTCAGCCACATCCACAGCATCTA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC231973 representing NM_001270397
Red=Cloning site Green=Tags(s)

MEEGMNVLHDFGIQSTHYLQVNYQDSQDWFILVSVIADLRNIFYVLPFIWFHLQEAVGIKLLWVAVIGDW
LNLVFKWILFGQRPYWWVLDTDYYSNTSVPLIKQFPVTCETGPGKDKADLQISVLECHFVVGILGCAAE
LSVTNLPCCSFSSSSCCWSPVRHCCCRNFQHPQHL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

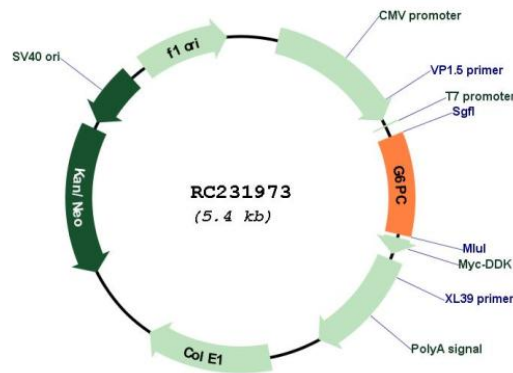


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Cloning Scheme:



Plasmid Map:



ACCN: NM_001270397

ORF Size: 528 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_001270397.2
RefSeq Size:	4092 bp
RefSeq ORF:	531 bp
Locus ID:	2538
UniProt ID:	P35575
Cytogenetics:	17q21.31
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Transmembrane
Protein Pathways:	Adipocytokine signaling pathway, Galactose metabolism, Glycolysis / Gluconeogenesis, Insulin signaling pathway, Metabolic pathways, Starch and sucrose metabolism
MW:	20.7 kDa
Gene Summary:	<p>Glucose-6-phosphatase (G6Pase) is a multi-subunit integral membrane protein of the endoplasmic reticulum that is composed of a catalytic subunit and transporters for G6P, inorganic phosphate, and glucose. This gene (G6PC) is one of the three glucose-6-phosphatase catalytic-subunit-encoding genes in human: G6PC, G6PC2 and G6PC3. Glucose-6-phosphatase catalyzes the hydrolysis of D-glucose 6-phosphate to D-glucose and orthophosphate and is a key enzyme in glucose homeostasis, functioning in gluconeogenesis and glycogenolysis. Mutations in this gene cause glycogen storage disease type I (GSD1). This disease, also known as von Gierke disease, is a metabolic disorder characterized by severe hypoglycemia associated with the accumulation of glycogen and fat in the liver and kidneys. [provided by RefSeq, Feb 2011]</p>