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Product datasheet for RC215623

glucose 6 phosphatase, catalytic subunit (G6PC) (NM_000151) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	glucose 6 phosphatase, catalytic subunit (G6PC) (NM_000151) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	glucose 6 phosphatase, catalytic subunit
Synonyms:	G6Pase; G6PC; G6PT; GSD1; GSD1a
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC215623 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAGGAAGGAATGAATGTTCTCCATGACTTTGGGATCCAGTCAACACATTACCTCCAGGTGAATTACC
AAGACTCCCAGGACTGGTTCATCTTGGTGTCCGTGATCGCAGACCTCAGGAATGCCTTCTACGTCCTCTT
CCCCATCTGGTTCCATCTTCAGGAAGCTGTGGGCATTAAACTCCTTTGGGTAGCTGTGATTGGAGACTGG
CTCAACCTCGTCTTTAAGTGGATTCTCTTTGGACAGCGTCCATACTGGTGGGTTTTGGATACTGACTACT
ACAGCAACACTTCCGTGCCCCTGATAAAGCAGTTCCCTGTAACCTGTGAGACTGGACCAGGGAGCCCCTC
TGGCCATGCCATGGGCACAGCAGGTGTATACTACGTGATGGTCACATCTACTCTTTCCATCTTTCAGGGA
AAGATAAAGCCGACCTACAGATTTCGGTGCTTGAATGTCATTTTGTGGTTGGGATTCTGGGCTGTGCAGC
TGAATGTCTGTCTGTCACGAATCTACCTTGCTGCTCATTTTCCTCATCAAGTTGTTGCTGGAGTCCTGTC
AGGCATTGCTGTTGCAGAAACTTTCAGCCACATCCACAGCATCTATAATGCCAGCCTCAAGAAATATTTT
CTCATTACCTTCTTCCTGTTCAGCTTCGCCATCGGATTTTATCTGCTGCTCAAGGGACTGGGTGTAGACC
TCCTGTGGACTCTGGAGAAAGCCCAGAGGTGGTGCGAGCAGCCAGAATGGGTCCACATTGACACCACACC
CTTTGCCAGCCTCCTCAAGAACCTGGGCACGCTCTTTGGCCTGGGGCTGGCTCTCAACTCCAGCATGTAC
AGGGAGAGCTGCAAGGGGAAACTCAGCAAGTGGCTCCCATTCCGCCTCAGCTCTATTGTAGCCTCCCTCG
TCCTCCTGCACGTCTTTGACTCCTTGAAACCCCCATCCCAAGTCGAGCTGGTCTTCTACGTCTTGTCCTT
CTGCAAGAGTGCGGTAGTGCCCCTGGCATCCGTCAGTGTCATCCCCTACTGCCTCGCCCAGGTCCTGGGC
CAGCCGCACAAGAAGTCGTTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC215623 protein sequence
Red=Cloning site Green=Tags(s)

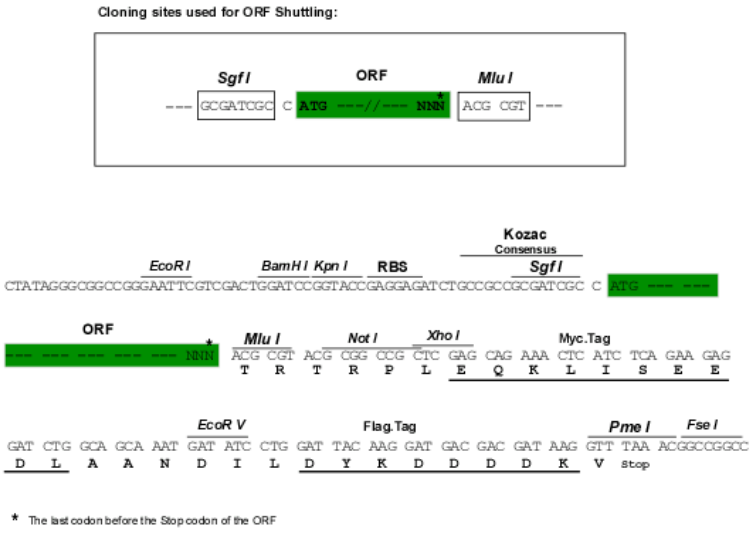
MEEGMNVLHDFGIQSTHYLQVNYQDSQDWFILVSVIADLRNAFYVLFPIWFHLQEAVGIKLLWVAVIGDW
LNLVFKWILFGQRPYWWVLDTDYYSNTSVPLIKQFPVTCETGPGSPSGHAMGTAGVYYVMVTSTLSIFQG
KIKPTYRFRCLNVILWLGFWAVQLNVCLSRIYLAAHFPHQVVAGVLSGIAVAETFSHIHSIYNASLKKYF
LITFFLFSFAIGFYLLLKGLGVDLLWTLEKAQRWCEQPEWVHIDTTPFASLLKNLGTLFGLGLALNSSMY
RESCKGKLSKWLPFRLSSIVASLVLLHVFDSLKPPSQVELVFYVLSFCKSAVVPLASVSVIPYCLAQVLG
QPHKKSL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6468_g03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000151

ORF Size: 1071 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).

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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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_000151.4
RefSeq Size:	4169 bp
RefSeq ORF:	1074 bp
Locus ID:	2538
UniProt ID:	P35575
Cytogenetics:	17q21.31
Domains:	acidPPc
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:	40.5 kDa
Gene Summary:	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]

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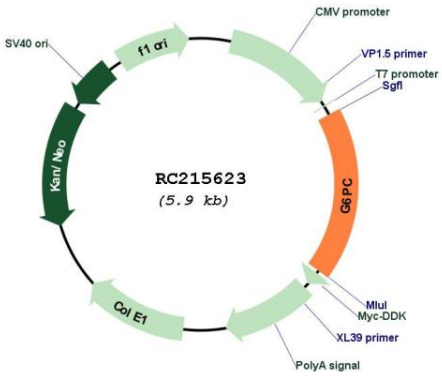
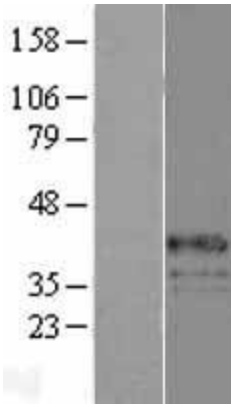
Product images:



Circular map for RC215623



Western blot validation of overexpression lysate (Cat# [LY424901]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC215623 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

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