

Product datasheet for **RC201807**

Glucose 6 Phosphate Dehydrogenase (G6PD) (NM_001042351) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glucose 6 Phosphate Dehydrogenase (G6PD) (NM_001042351) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Glucose 6 Phosphate Dehydrogenase
Synonyms:	G6PD1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC201807 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGGCAGAGCAGGTGGCCCTGAGCCGACCAGGTGTGCGGGATCCTGCGGGAAGAGCTTTCCAGGGCG
 ATGCCTTCCATCAGTCGGATACACACATATTCATCATCATGGGTGCATCGGGTGACTGGCCAAGAAGAA
 GATCTACCCACCATCTGGTGGCTGTTCCGGGATGGCCTTCTGCCGAAAACACCTTCATCGTGGGCTAT
 GCCCGTCCCGCCTCACAGTGGCTGACATCCGCAACAGAGTGAGCCCTTCTTCAAGGCCACCCAGAGG
 AGAAGCTCAAGCTGGAGGACTTCTTTGCCCGCACTCCTATGTGGCTGGCCAGTACGATGATGCAGCCTC
 CTACCAGCGCTCAACAGCCACATGAATGCCCTCCACCTGGGGTACAGGCCAACCCGCTCTTCTACCTG
 GCCTTGCCCCGACCGTCTACGAGGCCGTACCAAGAACATTACGAGTCTGCATGAGCCAGATAGGCT
 GGAACCGCATCATCGTGGAGAAGCCCTTCGGGAGGGACCTGCAGAGCTCTGACCGGCTGTCCAACCAT
 CTCTCCCTGTTCCGTGAGGACCAGATCTACCGCATCGACCACTACCTGGCAAGGAGATGGTGCAGAAC
 CTATGGTGTGAGATTTGCCAACAGGATCTTCGGCCCATCTGGAACCGGGACAACATCGCCTGGGTTA
 TCCTCACCTTCAAGGAGCCCTTTGGCACTGAGGGTTCGCGGGGGCTATTTTCGATGAATTTGGGATCATCCG
 GGACGTGATGCAGAACCCCTACTGCAGATGCTGTGTCTGGTGGCCATGGAGAAGCCCGCTCCACCAAC
 TCAGATGACGTCCGTGATGAGAAGTCAAGGTGTTGAAATGCATCTCAGAGGTGCAGGCCAACAAATGTGG
 TCCTGGGCCAGTACGTGGGAACCCCGATGGAGAGGGCGAGGCCACCAAGGGTACCTGGACGACCCAC
 GGTGCCCGCGGGTCCACCACCGCCACTTTTGCAGCCGTCGTCTCTATGTGGAGAATGAGAGGTGGGAT
 GGGGTGCCCTTCACTCTGCGCTGCGCAAGGCCCTGAACGAGCGCAAGGCCGAGGTGAGGCTGCAGTTC
 ATGATGTGGCCGGCGACATCTTCCACAGCAGTGAAGCGCAACGAGCTGGTGTGATCCGCGTGCAGCCAA
 CGAGGCCGTGTACACCAAGATGATGACCAAGAAGCCGGGATGTTCTTCAACCCGAGGAGTCGGAGCTG
 GACCTGACCTACGCAACAGATAACAAGAAGCTGAAGCTCCTGACGCCTATGAGCGCCTCATCTGGACG
 TCTTCTGCGGGAGCCAGATGCACTTCGTGCGCAGCGACGAGCTCCGTGAGGCCTGGCGTATTTTACCCC
 ACTGCTGCACCAGATTGAGCTGGAGAAGCCCAAGCCCATCCCCTATATTTATGGCAGCCGAGGCCCCACG
 GAGGCAGACGAGCTGATGAAGAGAGTGGGTTCCAGTATGAGGGCACCTACAAGTGGTGAACCCCCACA
 AGCTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC201807 protein sequence
 Red=Cloning site Green=Tags(s)

MAEQVALSRTQVCGILREELFQGDFAHQSDTHIFIIMGASGDLAKKKIYPTIWWLFRDGLLPENTFIVGY
 ARSRLTVADIRKQSEPFKATPEEKLKLEDFFARNSYVAGQYDDAASYQRLNSHMNALHLSQANRLFYL
 ALPPTVYEAATKNIHESCMSQIGWNRIIVEKPFGRDLQSSDRLSNHISSLFREDQIYRIDHYLGKEMVQN
 LMVLRFANRIFGPIWNRDNIACVILTFKEPFGTEGRGGYDFEFGIIRDVMQNHLQLMLCLVAMEKPASTN
 SDDVRDEKVKVLKCISEVQANNVVLGQYVGNPDGEGEATKGYLDDPTVPRGTTATFAAVLVYVENERWD
 GVPFILRCGKALNERKAEVRLQFHDVAGDIFHQCKRNELVIRVQPNEAVYTKMMTKKPGMFFNPEESEL
 DLTYGNYRKNVLPDAYERLILDVFCGSQMHFVRSDELREAWRIFTPLLHQIELEKPKPIPIYIGSRGPT
 EADELMKRVGFQYEGTYKVVNPHKL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6581_b05.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



ACCN: NM_001042351

ORF Size: 1545 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:**
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_001042351.3](#)

RefSeq Size: 2295 bp

RefSeq ORF: 1548 bp

Locus ID: 2539

UniProt ID: [P11413](#)

Cytogenetics: Xq28

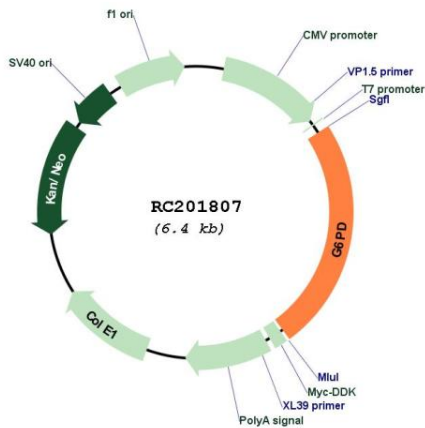
Protein Families: Druggable Genome

Protein Pathways: Glutathione metabolism, Metabolic pathways, Pentose phosphate pathway

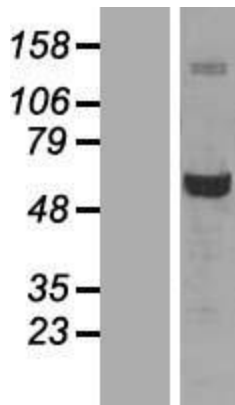
MW: 59.3 kDa

Gene Summary: This gene encodes glucose-6-phosphate dehydrogenase. This protein is a cytosolic enzyme encoded by a housekeeping X-linked gene whose main function is to produce NADPH, a key electron donor in the defense against oxidizing agents and in reductive biosynthetic reactions. G6PD is remarkable for its genetic diversity. Many variants of G6PD, mostly produced from missense mutations, have been described with wide ranging levels of enzyme activity and associated clinical symptoms. G6PD deficiency may cause neonatal jaundice, acute hemolysis, or severe chronic non-spherocytic hemolytic anemia. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

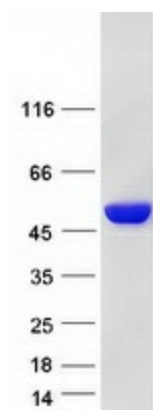
Product images:



Circular map for RC201807



Western blot validation of overexpression lysate (Cat# [LY420843]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201807 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified G6PD protein (Cat# [TP301807]). The protein was produced from HEK293T cells transfected with G6PD cDNA clone (Cat# RC201807) using MegaTran 2.0 (Cat# [TT210002]).