

Product datasheet for **RG201807**

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:	TurboGFP
Symbol:	G6PD
Synonyms:	G6PD1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG201807 representing NM_001042351
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGGCAGAGCAGGTGGCCCTGAGCCGACCAGGTGTGCGGGATCCTGCGGGAAGAGCTTTCCAGGGCG
 ATGCCTTCCATCAGTCCGATACACACATATTCATCATCATGGGTGCATCGGGTGACCTGGCCAAGAAGAA
 GATCTACCCACCATCTGGTGGCTGTTCCGGGATGGCCTTCTGCCGAAAACACCTTCATCGTGGGCTAT
 GCCCGTCCCGCCTCACAGTGGCTGACATCCGCAACAGAGTGAGCCCTTCTCAAGGCCACCCAGAGG
 AGAAGCTCAAGCTGGAGGACTTCTTTGCCCGCACTCCTATGTGGCTGGCCAGTACGATGATGCAGCCTC
 CTACCAGCGCCTCAACAGCCACATGAATGCCCTCCACCTGGGGTACAGGCCAACCCGCTCTTCTACCTG
 GCCTTGCCCCGACCGTCTACGAGGCCGTACCAAGAACATTACGAGTCTGCATGAGCCAGATAGGCT
 GGAACCGCATCATCGTGGAGAAGCCCTTCGGGAGGGACCTGCAGAGCTCTGACCGGCTGTCCAACCAT
 CTCCTCCCTGTTCCGTGAGGACCAGATCTACCGCATCGACCACTACCTGGCAAGGAGATGGTGCAGAAC
 CTATGGTGTGAGATTTGCCAACAGGATCTTCGGCCCATCTGGAACCGGGACAACATCGCCTCGGTTA
 TCCTCACCTTCAAGGAGCCCTTTGGCACTGAGGGTTCGCGGGGGCTATTTTCGATGAATTTGGGATCATCCG
 GGACGTGATGCAGAACCCACTACTGCAGATGCTGTGTCTGGTGGCCATGGAGAAGCCCGCCTCCACCAAC
 TCAGATGACGTCCGTGATGAGAAGTCAAGGTGTTGAAATGCATCTCAGAGGTGCAGGCCAACAAATGTGG
 TCCTGGGCCAGTACGTGGGGAACCCCGATGGAGAGGGCGAGGCCACCAAGGGTACCTGGACGACCCAC
 GGTGCCCGCGGGTCCACCACCGCCACTTTTGCAGCCGTCTGCTCTATGTGGAGAATGAGAGGTGGGAT
 GGGGTGCCCTTTCATCTCGCTGCGGCAAGGCCCTGAACGAGCGCAAGGCCGAGGTGAGGCTGCAGTTCC
 ATGATGTGGCCGGCGACATCTTCCACAGCAGTGCAGCGCAACGAGCTGGTGTGATCCGCGTGCAGCCCAA
 CGAGGCCGTGTACACCAAGATGATGACCAAGAAGCCGGGATGTTCTTCAACCCGAGGATCGGAGCTG
 GACCTGACCTACGGCAACAGATACAAGAAGCTGAAGCTCCCTGACGCCTATGAGCGCCTCATCTGGACG
 TCTTCTGCGGGAGCCAGATGCACTTCGTGCGCAGCGACGAGCTCCGTGAGGCCTGGCGTATTTTACCCC
 ACTGCTGCACCAGATTGAGCTGGAGAAGCCCAAGCCCATCCCCTATATTTATGGCAGCCGAGGCCCCACG
 GAGGCAGACGAGCTGATGAAGAGAGTGGGTTCCAGTATGAGGGCACCTACAAGTGGTGAACCCCCACA
 AGCTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG201807 representing NM_001042351
 Red=Cloning site Green=Tags(s)

MAEQVALSRTQVCGILREELFQGDFAHQSDTHIFIIMGASGDLAKKKIYPTIWWLFRDGLLPENTFIVGY
 ARSRLTVADIRKQSEPFKATPEEKLKLEDFFARNSYVAGQYDDAASYQRLNSHMNALHLGSQANRLFYL
 ALPPTVYEAVTKNIHESCMSQIGWNRIIVEKPFGRDLQSSDRLSNHISSLFREDQIYRIDHYLGKEMVQN
 LMVLRFANRIFGPIWNRDNIACVILTFKEPFGTEGRGGYFDEFGIIRDVMQNHLQLMLCLVAMEKPASTN
 SDDVDRDEKVKVLKCISEVQANNVVLGQYVGNPDGEGEATKGYLDDPTVPRGTTATFAAVVLYVENERWD
 GVPFILRCGKALNERKAEVRLQFHDVAGDIFHQQCKRNELVIRVQPNEAVYTKMMTKKPGMFFNPEESEL
 DLTYGNYKVNKLPDAYERLILDVFCGSQMHFVRSDELREAWRIFTPLLHQIELEKPKPIPIYIGSRGPT
 EADELMKRVGFQYEGTYKVVNPHKL

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

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:	<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_001042351.3
RefSeq Size:	2270 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
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]