

Product datasheet for **SC317927**

Glucose 6 Phosphate Dehydrogenase (G6PD) (NM_000402) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glucose 6 Phosphate Dehydrogenase (G6PD) (NM_000402) Human Untagged Clone
Tag:	Tag Free
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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Fully Sequenced ORF: >SC317927 representing NM_000402.
 Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGGCCGGCGGGGCTCAGCCCCGAAACGGTCGTACACTTCGGGGCTGCGAGCGCGGAGGGCGACGA
CGACGAAGCGCAGACAGCGTCATGGCAGAGCAGGTGGCCCTGAGCCGGACCCAGGTGTGCGGGATCCTG
CGGAAGAGCTTTTCCAGGGCGATGCCCTCCATCAGTCGGATACACACATATTATCATCATGGGTGCA
TCGGGTGACCTGGCCAAGAAGAAGATCTACCCACCATCTGGTGCTGTTCCGGGATGGCCTTCTGCC
GAAACACCTTTCATCGTGGGCTATGCCCTTCCCGCTCACAGTGGCTGACATCCGCAAACAGAGTGAG
CCCTTCTCAAGGCCACCCAGAGGAGAAGCTCAAGCTGGAGGACTTCTTTGCCCGCAACTCCTATGTG
GCTGGCCAGTACGATGATGCAGCCTCTACCAGCGCTCAACAGCCACATGAATGCCCTCCACCTGGGG
TCACAGGCCAACCGCCTTTCTACCTGGCCTTCCCCCGACCGTCTACGAGGCCGTACCAAGAACATT
CAGGAGTCTGCATGAGCCAGATAGGCTGGAACCGCATCATCGTGGAAGAAGCCCTTCGGGAGGGACCTG
CAGAGCTCTGACCGGCTGTCCAACCACATCTCCTCCCTGTTCCGTGAGGACCAGATCTACCGCATCGAC
CACTACCTGGGCAAGGAGATGGTGCAGAACCTCATGGTGTGAGATTTGCCAACAGGATCTTCGGCCCC
ATCTGGAACCGGGACAACATCGCCTGCGTTATCCTCACCTTCAAGGAGCCCTTTGGCACTGAGGGTCGC
GGGGGCTATTTTCGATGAATTTGGGATCATCCGGGACGTGATGCAGAACCCACTACTGCAGATGCTGTGT
CTGGTGGCCATGGAGAAGCCCGCTCCACCAACTCAGATGACGTCGGTATGAGAAGGTCAAGGTGTTG
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GGCGAGGCCACCAAGGGTACCTGGACGACCCACGGTCCCCCGGGTCCACCACCGCCACTTTTGCA
GCCGTCCTCTATGTGGAGAATGAGAGGTGGGATGGGTGCCCTTTCATCTGCGTGGCGCAAGGCC
CTGAACGAGCGCAAGGCCGAGGTGAGGCTGCAGTCCATGATGTGGCCGGCGACATCTTCCACCAGCAG
TGCAAGCGCAACGAGCTGGTGTATCCGCGTGCAGCCCAACGAGGCCGTGTACACCAAGATGATGACCAAG
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GTGAAGCTCCCTGACGCCTATGAGCGCCTCATCCTGGACGCTTCTGCGGGAGCCAGATGCACCTCGTG
CGCAGCGACGAGCTCCGTGAGGCCTGGCGTATTTTACCCCACTGCTGCACCAGATTGAGCTGGAGAAG
CCCAAGCCATCCCCTATATTTATGGCAGCCGAGGCCCCACGGAGGCAGACGAGCTGATGAAGAGAGTG
GGTTTCCAGTATGAGGGCACCTACAAGTGGGTGAACCCCAAGCTTGA
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
  
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Restriction Sites: SgfI-MluI

ACCN: NM_000402

Insert Size: 1638 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation: This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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_000402.4](#)

RefSeq Size: 2406 bp

RefSeq ORF: 1638 bp

Locus ID: 2539

UniProt ID: [P11413](#)

Cytogenetics: Xq28

Domains: G6PD

Protein Families: Druggable Genome

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

MW: 62.5 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]
Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (a). This full-length 545 aa form has been reported to be inactive, but may be processed to the smaller (515 aa) active form (PMID:8466644).