

Product datasheet for **SC322244**

PHGDH (NM_006623) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PHGDH (NM_006623) Human Untagged Clone
Tag:	Tag Free
Symbol:	PHGDH
Synonyms:	3-PGDH; 3PGDH; HEL-S-113; NLS; NLS1; PDG; PGAD; PGD; PGDH; PHGDHD; SERA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene sequence for SC322244
 GAGGAGGAGGAGGAGATGACTGGGGAGCGGGAGCTCGAGAATACTGCCAGTTACTCTAG
 CGCGCCAGGCCGAACCGCAGCTTCTTGGCTTAGGTACTTCTACTCACAGCGGCCGATTCC
 GAGGCCAACTCCAGCAATGGCTTTTGCAAATCTGCGGAAAGTGCTCATCAGTGACAGCCT
 GGACCCTTGCTGCCGGAAGATCTTGCAAGATGGAGGGCTGCAGGTGGTGGAAAAGCAGAA
 CCTTAGCAAAGAGGAGCTGATAGCGGAGCTGCAGGACTGTGAAGGCCTTATTGTTGCTC
 TGCCACCAAGGTGACCGCTGATGTCATCAACGCAGCTGAGAAACTCCAGGTGGTGGGCAG
 GGCTGGCACAGGTGTGGACAATGTGGATCTGGAGGCCGCAACAAGGAAGGGCATCTTGGT
 TATGAACACCCCCAATGGGAACAGCCTCAGTGCCGCAAGACTCACTTGTGGAATGATCAT
 GTGCCTGGCCAGGCAGATTCCCCAGGCGACGGCTTCGATGAAGGACGGCAAATGGGAGCG
 GAAGAAGTTCATGGGAACAGAGCTGAATGGAAAGACCCTGGGAATTTTGGCCTGGGCGAG
 GATTGGGAGAGAGGTAGCTACCCGGATGCAGTCTTTGGGATGAAGACTATAGGGTATGA
 CCCCATCATTTCCCAGAGGTCTCGGCCTCCTTGGTGTTCAGCAGCTGCCCTGGAGGA
 GATCTGGCCTCTCTGTGATTTCACTACTGTGCACACTCCTCTCCTGCCCTCCACGACAGG
 CTTGCTGAATGACAACACCTTTGCCAGTGCAAGAAGGGGGTGGTGTGGTGAACGTGTC
 CCGTGGAGGGATCGTGGACGAAGGCGCCCTGCTCCGGGCCCTGCAGTCTGGCCAGTGTGC
 CGGGGCTGCACTGGACGTGTTTACGGAAGAGCCGCCACGGGACCGGGCCTTGGTGGACCA
 TGAGAATGTCATCAGCTGTCCCCACCTGGGTGCCAGCACCAAGGAGGCTCAGAGCCGCTG
 TGGGGAGGAAATTGCTGTTCAAGTTCGTGGACATGGTGAAGGGGAAATCTCTCACGGGGGT
 TGTGAATGCCAGGCCCTTACCAGTGCCTTCTCTCCACACACCAAGCCTTGGATTGGTCT
 GGCAGAAGCTCTGGGACACTGATGCGAGCCTGGGCTGGTCCCCAAAGGGACCATCCA
 GGTGATAACACAGGGAACATCCCTGAAGAATGCTGGGAAGTGCCTAAGCCCCGCAGTCAT
 TGTCCGCCTCCTGAAAGAGGCTTCCAAGCAGGCGGATGTGAAGTGGTGAACGCTAAGCT
 GCTGGTGAAGAGGCTGGCCTCAATGTCACCACCTCCCACAGCCCTGCTGCACCAGGGGA
 GCAAGGCTTCGGGAATGCCTCCTGGCCGTGGCCCTGGCAGGCGCCCTTACCAGGCTGT
 GGGCTTGGTCCAAGGCACTACACCTGTAAGTGCAGGGGCTCAATGGAGCTGTCTTCAGGCC
 AGAAGTGCCTCTCCGAGGGACCTGCCCTGCTCCTATTCCGGACTCAGACCTCTGACCC
 TGCAATGCTGCCTACCATGATTGGCCTCCTGGCAGAGGCAGGCGTGGGCTGCTGCCTA
 CCAGACTCACTGGTGTGATGGGAGACCTGGCACGTGATGGGCATCTCCTCCTTGT
 GCCCAGCCTGGAAGCGTGAAGCAGCATGTGACTGAAGCCTTCCAGTCCACTTCTAACC
 TTGGAGCTCACTGGTCCCTGCCTCTGGGGCTTTTCTGAAGAAACCCACCCACTGTGATCA
 ATAGGGAGAGAAAATCCACATTCTTGGGCTGAACGCGGGCCTCTGACACTGCTTACACTG
 CACTCTGACCCTGTAGTACAGCAATAACCGTCTAATAAAGAGCCTACCCCAAAAAAAAAA
 AA

Restriction Sites: Please inquire
ACCN: NM_006623

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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 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_006623.2](#), [NP_006614.2](#)

RefSeq Size: 1968 bp

RefSeq ORF: 1602 bp

Locus ID: 26227

UniProt ID: [O43175](#)

Cytogenetics: 1p12

Domains: 2-Hacid_DH, 2-Hacid_DH_C

Protein Families: Druggable Genome, Stem cell - Pluripotency

Protein Pathways: Glycine, serine and threonine metabolism, Metabolic pathways

Gene Summary:

This gene encodes the enzyme which is involved in the early steps of L-serine synthesis in animal cells. L-serine is required for D-serine and other amino acid synthesis. The enzyme requires NAD/NADH as a cofactor and forms homotetramers for activity. Mutations in this gene have been found in a family with congenital microcephaly, psychomotor retardation and other symptoms. Multiple alternatively spliced transcript variants have been found, however the full-length nature of most are not known. [provided by RefSeq, Aug 2011]