

Product datasheet for **SC330521**

GAPDH (NM_001256799) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GAPDH (NM_001256799) Human Untagged Clone
Tag:	Tag Free
Symbol:	GAPDH
Synonyms:	G3PD; GAPD; HEL-S-162eP
Mammalian Cell Selection:	Neomycin
Vector:	<u>PCMV6-Neo</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001256799, the custom clone sequence may differ by one or more nucleotides

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ATGTTTTACATGTTCCAATATGATTCCACCCATGGCAAATTCATGGCACCGTCAAGGCTGAGAACGGGA  
AGCTTGTCAATGAAATCCCATCACCATCTCCAGGAGCGAGATCCCTCCAAAATCAAGTGGGGCGA  
TGCTGGCGCTGAGTACGTCTGGAGTCCACTGGCGTCTCACCACCATGGAGAAGGCTGGGGCTCATTTG  
CAGGGGGGAGCCAAAAGGGTCATCATCTCTGCCCCCTCTGCTGATGCCCCATGTTGTCATGGGTGTGA  
ACCATGAGAAGTATGACAACAGCCTCAAGATCATCAGCAATGCCTCCTGCACCACCAACTGCTTAGCACC  
CCTGGCCAAGGTCATCCATGACAACTTTGGTATCGTGGAAGGACTCATGACCACAGTCCATGCCATCACT  
GCCACCCAGAAGACTGTGGATGGCCCCCTCCGGGAAACTGTGGCGTATGGCCGCGGGGCTCTCCAGAACA  
TCATCCCTGCCTCTACTGGCGCTGCCAAGGCTGTGGGCAAGGTCATCCCTGAGCTGAACGGGAAGCTCAC  
TGGCATGGCCTTCCGTGTCCCCACTGCCAAGTGTGAGTGGTGGACCTGACCTGCCGTCTAGAAAAACCT  
GCCAAATATGATGACATCAAGAAGTGGTGAAGCAGGCGTCGGAGGGCCCCCTCAAGGGCATCCTGGGCT  
ACACTGAGCACCAGGTGGTCTCCTCTGACTTCAACAGCGACCCACTCCTCCACCTTTGACGCTGGGGC  
TGGCATTGCCCTCAACGACCACTTTGTCAAGCTCATTTCTGGTATGACAACGAATTTGGCTACAGCAAC  
AGGGTGGTGGACCTCATGGCCACATGGCTCCAAGGAGTAA
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Restriction Sites:	Sgfl-Mlul
ACCN:	NM_001256799



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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](#)

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_001256799.1](#), [NP_001243728.1](#)

RefSeq Size: 1425 bp

RefSeq ORF: 882 bp

Locus ID: 2597

UniProt ID: [P04406](#)

Cytogenetics: 12p13.31

Protein Families: ES Cell Differentiation/IPS

Protein Pathways: Alzheimer's disease, Glycolysis / Gluconeogenesis, Metabolic pathways

Gene Summary:

This gene encodes a member of the glyceraldehyde-3-phosphate dehydrogenase protein family. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. The product of this gene catalyzes an important energy-yielding step in carbohydrate metabolism, the reversible oxidative phosphorylation of glyceraldehyde-3-phosphate in the presence of inorganic phosphate and nicotinamide adenine dinucleotide (NAD). The encoded protein has additionally been identified to have uracil DNA glycosylase activity in the nucleus. Also, this protein contains a peptide that has antimicrobial activity against *E. coli*, *P. aeruginosa*, and *C. albicans*. Studies of a similar protein in mouse have assigned a variety of additional functions including nitrosylation of nuclear proteins, the regulation of mRNA stability, and acting as a transferrin receptor on the cell surface of macrophage. Many pseudogenes similar to this locus are present in the human genome. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Nov 2014]

Transcript Variant: This variant (2) differs in the 5' UTR and lacks a portion of the 5' coding region compared to variant 1. These differences cause translation initiation at a downstream start codon and result in an isoform (2) with a shorter N-terminus compared to isoform 1.