

Product datasheet for SC118869

GAPDH (NM_002046) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GAPDH (NM_002046) Human Untagged Clone
Tag:	Tag Free
Symbol:	GAPDH
Synonyms:	G3PD; GAPD; HEL-S-162eP
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene ORF sequence for NM_002046 edited
 ATGGGGAAGGTGAAGTCCGAGTCAACGGATTTGGTCGTATTGGGCGCCTGGTCACCAGG
 GCTGCTTTTAACTCTGGTAAAGTGGATATTGTTGCCATCAATGACCCCTTCATTGACCTC
 AACTACATGGTTTACATGTTCCAATATGATTCCACCCATGGCAAATTCATGGCACCGTC
 AAGGCTGAGAACGGGAAGCTTGTCAATGAAATCCCATCACCATCTCCAGGAGCGA
 GATCCCTCCAAAATCAAGTGGGCGATGCTGGCGCTGAGTACGTCGTGGAGTCCACTGGC
 GTCTTCACCACCATGGAGAAGGCTGGGGCTCATTTGCAGGGGGGAGCCAAAAGGGTCATC
 ATCTCTGCCCCCTCTGCTGACGCCCCATGTTTCGTATGGGTGTGAACCATGAGAAGTAT
 GACAACAGCCTCAAGATCATCAGCAATGCCTCCTGCACCACCAACTGCTTAGCACCCCTG
 GCCAAGGTCATCCATGACAACCTTTGGTATCGTGGAAGGACTCATGACCACAGTCCATGCC
 ATCACTGCCACCCAGAAGACTGTGGATGGCCCCCTCCGGGAAACTGTGGCGTGATGGCCGC
 GGGGCTCTCCAGAACATCATCCCTGCCTCTACTGGCGCTGCCAAGGCTGTGGGCAAGGTC
 ATCCCTGAGCTGAACGGGAAGCTCACTGGCATGGCCTTCCGTGTCCCCACTGCCAACGTG
 TCAGTGGTGGACCTGACCTGCCGTCTAGAAAAACCTGCCAAATATGATGACATCAAGAAG
 GTGGTGAAGCAGGCGTCGGAGGGCCCCCTCAAGGGCATCCTGGGTACACTGAGCACCAG
 GTGGTCTCCTCTGACTTCAACAGCGACCCCACTCCTCCACCTTCGACGCTGGGGCTGGC
 ATTGCCCTCAACGACCACTTTGTCAAGCTCATTTCCTGGTATGACAACGAATTTGGCTAC
 AGCAACAGGGTGGTGGACCTCATGGCCACATGGCCTCCAAGGAGTAA



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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_002046 unedited
 ACGAGGTTTCGACAGTCAGCCGCATCTTCTTTTTCGTCGCCAGCCGAGCCACATCGCTGAN
 ACACCATGGGGAAGGTGAAGGTCGGAGTCAACGGATTTGGTCGTATTGGGCGCCTGGTCA
 CCAGGGCTGCTTTAACTCTGGTAAAGTGGATATTGTTGCCATCAATGACCCCTTCATTG
 ACCTCAACTACATGGTTTACATGTTCCAATATGATTCCACCCATGGCAAATTCATGGCA
 CCGTCAAGGCTGAGAACGGGAAGCTTGTATCAATGGAATCCCATCACCATCTCCAGG
 AGCGAGATCCCTCCAAAATCAAGTGGGGCGATGCTGGCGCTGAGTACGTCGTGGAGTCCA
 CTGGCGTCTTCACCACCATGGAGAAGGCTGGGGCTCATTTCAGGGGGGAGCCAAAAGGG
 TCATCATCTCTGCCCCCTCTGCTGACGCCCCCATGTTTCGTCATGGGTGTGAACCATGAGA
 AGTATGACAACAGCCTCAAGATCATCAGCAATGCCTCCTGCACCACCACTGCTTAACAC
 CCCTGGCCAAGGGTCATCCATGACAACCTTTGGTATCGTGGAAAGGACTCATGACCACAGTC
 CATGCCATCACTGCCACCCAAAANACTGTGGGATGGCCCCCTNCGGAAACTGTGGGCGT
 GATGGCCCGNGGGGCTCTNCANAACATTATNCCTGCCTNTACTGGGCGTGCCAAGGCTG
 GGGGGCAAGGTATTCTTGAAGTGAACGGGAANCTCACTGGCATGGGCTTTTCGTGTCC
 CCCTGGCAACGTGTTAGGGGGGGACCTGACCTGCCGTTAAAAAANCTGCCAAATTGAT
 GACCTCAAAAAGGGG

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_002046 unedited
 TTGGTATGGCAACTTCCAGNCCAGGTANAGCACTGGGGNAGGGTCACAGGNATGCCACC
 CGGGATCTGTTTCAGGAAACAGCTATGACCGCGCCGCAATCTAGAGTCGAGTTTTTTTTT
 TTTTTTTTTGGTTGAGCACAGGGTACTTTATTGATGGTACATGACAAGGTGCGGCTCCCT
 AGGCCCCCTCCCCTCTTCAAGGGTCTACATGGAACTGTGAGGAGGGGAGATTCAAGTGTG
 GTGGGGGACTGAGTGTGGCAGGGACTCCCAGCAGTGAGGGTCTCTCTTCTTCTTGTG
 CTCTTGCTGGGGCTGGTGGTCCAGGGTCTTACTCCTTGAGGCCATGTGGGCCATGAGG
 TCCACCACCCTGTTGCTGTAGCCAAATTCGTTGTACATACCAGGAAATGAGCTTGACAAAG
 TGGTCTGTGAGGGCAATGCCAGCCCCAGCGTCNAAGGTGGAGGAGTGGGTGTCGCTGTTG
 AAGTCAGAGGAGACCACCTGGTGTCTAGTGTANCCAGGATGCCCTTGAGGGGGCCCTCC
 GACGCCTGCTTACCACCTTCTTGTATGTCATCATATTTGGCAGTTTTTTCTAGACGGCAG
 GTCAGGTCCACCACTGACACGTTGGCAGTGGGGACACGGAAGGCCATGCCAGTGAAGTTC
 CCGTTCAGCTCAGGGATGACCTTGCCCACAGCCTTGGCAGCGCCAGTAAAGGCAGGGATG
 ATGTTCTGGAGACCCCGCNGNCATCACGCACAGTTTCCCGAGGGGGCATCCACAGTCTT
 CTGGGTGCANNATGGCATGGACCTGTGTATGATTCTTACGATACCCAAAGTGCATG
 GATGACCTGGNCAGGGTGCTAA

Restriction Sites:

NotI-NotI

ACCN:

NM_002046

Insert Size:

1008 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).

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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_002046.2](#), [NP_002037.2](#)

RefSeq Size: 1283 bp

RefSeq ORF: 1008 bp

Locus ID: 2597

UniProt ID: [P04406](#)

Cytogenetics: 12p13.31

Domains: gpdh

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 (1) encodes the longest isoform (1).