

Product datasheet for **RG202309**

GAPDH (NM_002046) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GAPDH (NM_002046) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GAPDH
Synonyms:	G3PD; GAPD; HEL-S-162eP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG202309 representing NM_002046 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**C

ATGGGGAAGGTGAAGGTCGGAGTCAACGGATTTGGTCGATTGGGCGCCTGGTCACCAGGGCTGCTTTTA
ACTCTGGTAAAGTGGATATTGTTGCCATCAATGACCCCTTCATTGACCTCAACTACATGGTTTACATGTT
CCAATATGATTCCACCCATGGCAAATTCATGGCACCGTCAAGGCTGAGAACGGGAAGCTTGTCATCAAT
GGAAATCCCATCACCATCTTCCAGGAGCGAGATCCCTCCAAAATCAAGTGGGGCGATGCTGGCGCTGAGT
ACGTCGTGGAGTCCACTGGCGTCTTACCACCATGGAGAAGGCTGGGGCTCATTTGCAGGGGGAGCCAA
AAGGGTCATCATCTCTGCCCCCTCTGCTGATGCCCCATGTTTCGTCATGGGTGTGAACCATGAGAAGTAT
GACAACAGCCTCAAGATCATCAGCAATGCCTCCTGCACCACCAACTGCTTAGCACCCCTGGCCAAGGTCA
TCCATGACAACCTTTGGTATCGTGAAGGACTCATGACCACAGTCCATGCCATCACTGCCACCCAGAAGAC
TGTGGATGGCCCCCTCCGGGAAACTGTGGCGTGTGGCCGCGGGGCTCTCCAGAACATCATCCCTGCCTCT
ACTGGCGCTGCCAAGGCTGTGGCAAGGTCACTCCCTGAGCTGAACGGGAAGCTCACTGGCATGGCCTTCC
GTGTCCCCACTGCCAACGTGTAGTGGTGGACCTGACCTGCCGTCTAGAAAACTGCCAAATATGATGA
CATCAAGAAGGTGGTGAAGCAGGCGTCGGAGGGCCCCCTCAAGGGCATCCTGGGCTACACTGAGCACCAG
GTGGTCTCCTCTGACTTCAACAGCGACACCCACTCCTCCACCTTTGACGCTGGGGCTGGCATTGCCCTCA
ACGACCACTTTGTCAAGCTCATTTCCTGGTATGACAACGAATTTGGCTACAGCAACAGGGTGGTGGACCT
CATGGCCACATGGCCTCCAAGGAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG202309 representing NM_002046
 Red=Cloning site Green=Tags(s)

MGKVKVGVNGFGRIGRLVTRAAFNSGKVDIVAINDPFIDLNYMVYMFQYDSTHGKFGHTVKAENGLVIN
 GNPITIFQERDPSKIKWDAGAEYVVESTGVFTTMEKAGAHLQGGAKRVIISAPSADAPMFVMGVNHEKY
 DNSLKIISNASCTTNCLAPLAKVIHDNFGIVEGLMTTVHAITATQKTVDGPGSKLWRDGRGALQNIIPAS
 TGAAKAVGKVIPELNGKLTGMAFRVPTANVSVDLTCRLEKPAKYDDIKKVVVKQASEGPLKILGYTEHQ
 VVSSDFNSDTHSSTFDAGAGIALNDHFVKLISWYDNEFGYSNRVVDLMAHMASKE

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002046

ORF Size: 1005 bp

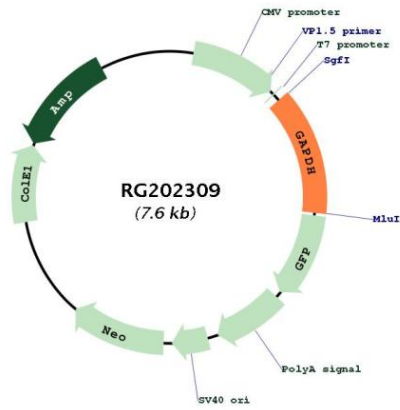
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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_002046.7
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:	<p>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 <i>E. coli</i>, <i>P. aeruginosa</i>, and <i>C. albicans</i>. 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]</p>

Product images:



Circular map for RG202309