

Product datasheet for **RG237527**

GAPDH (NM_001289746) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GAPDH (NM_001289746) 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:	>RG237527 representing NM_001289746. Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTT TAGTGAACCGTCAGAATTTTGT AATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCC GCGATCGCC
ATGGGAAGGTGAAGGTCGGAGTCAACGGATTTGGTCGATTGGGCGCCTGGTCACCAGGGCTGCTTTT
AACTCTGGTAAAGTGGATATTGTTGCCATCAATGACCCCTTCATTGACCTCAACTACATGGTTTACATG
TTCCAATATGATTCCACCCATGGCAAATTCATGGCACCGTCAAGGCTGAGAACGGGAAGCTTGTCATC
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ACTGAGCACCAGGTGGTCTCTCTGACTTCAACAGCGACCCACTCCTCCACCTTTGACGCTGGGGCT
GGCATTGCCCTCAACGACCACTTTGTCAAGCTCATTTCTGGTATGACAACGAATTTGGCTACAGCAAC
AGGGTGGTGGACCTCATGGCCACATGGCCTCCAAGGAG
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
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Protein Sequence: >Peptide sequence encoded by RG237527
 Blue=ORF Red=Cloning site Green=Tag(s)

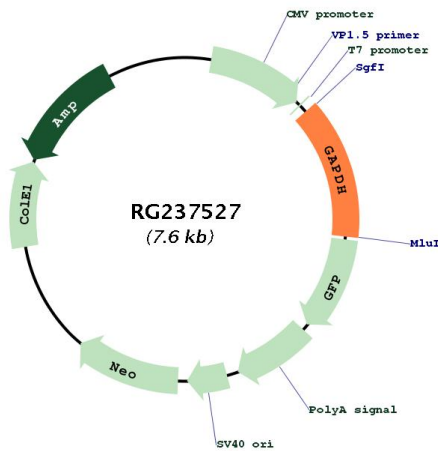
MGKVKVGVNGFGRIGRLVTRAAFNSGKVDIVAINDPFIDLNYMVYMFQYDSTHGKFGHTVKAENGLVI
 NGNPITIFQERDPSKIKWGDAGAEYVVESTGVFTTMEKAG AHLQGGAKRVIISAPSADAPMFVMGVNHE
 KYDNLKIIISNASCTTNCLAPLAKVIHDNFGIVEGLMTTVHAITATQKTVDGPGSKLWRDGRGALQNI
 PASTGAAKAVGKVIPELNGKLTGMFRVPTANVSVVDLTCRLEKPAKYDDIKKVVKQASEGPLKGI
 LGYTEHQVVSDFNSDTHSSTFDAGAGIALNDHFVKLISWYDNEFGYSNRVVDLMAHMASKE
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMKSTKGALTFSPYLLSHV
 MGYGFYHFGTYPSTYENPFLHAINNGGYTNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
 SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVD SHMHFKSAIHPSILQNGGPMFA
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001289746

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).
RefSeq:	NM_001289746.2
RefSeq Size:	1407 bp
RefSeq ORF:	1008 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
MW:	36.1 kDa
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 <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]