

Product datasheet for **RG225948**

Glycerol kinase (GK) (NM_001128127) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glycerol kinase (GK) (NM_001128127) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GK
Synonyms:	GK1; GKD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG225948 representing NM_001128127
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCAGCCTCAAAGAAGGCAGTTTTGGGGCCATTGGTGGGGCGGTGGACCAGGCACCCAGTTCGACGC
 GCTTTTTGGTTTTCAATTCAAAAACAGCTGAACTACTTAGTCATCATCAAGTAGAAATAAAAAAAGAGTT
 CCCAAGAGAAGGATGGGTGGAACAGGACCTAAGGAAATCTACATTCTGTCTATGAGTGTATAGAGAAA
 ACATGTGAGAAACTTGGACAGCTCAATATTGATATTTCCAACATAAAAGCTATTGGTGTGAGCAACCAGA
 GGGAAACCACTGTAGTCTGGGACAAGATAACTGGAGAGCCTCTACAATGCTGTGGTGTGGCTTGTATCT
 AAGAACCAGTCTACCGTTGAGAGTCTTAGTAAAAGAATCCAGGAAATAATAACTTTGTCAAGTCCAAG
 ACAGGCCCTCCACTTAGCACTTACTTCAGTGCAGTGAACCTCGTTGGCTCCTTGACAATGTGAGAAAAG
 TTCAAAGGCCGTTGAAGAAAAACGAGCTCTTTTTGGGACTATTGATTCATGGCTATTTGGAGTTTGAC
 AGGAGGAGTCAATGGAGGTGCCACTGTACAGATGTAACAAATGCAAGTAGGACTATGCTTTTCAACATT
 CATTCTTTGGAATGGGATAAACAACCTCTGCGAATTTTTTGGAAATCCAATGGAAATCTTCCAAATGTCC
 GGAGTTCTTCTGAGATCTATGGCCTAATGAAAGCTGGGGCCTTGAAGGTGTGCCAATATCTGGGTGTT
 AGGGGACCACTGCTGCATTGGTGGGACAAATGTGCTTCCAGATTGGACAAGCCAAAAATACGTATGGA
 ACAGGATGTTTCTACTATGTAATACAGGCCATAAGTGTGATTTTTCTGATCATGGCCTTCTCACCACAG
 TGGCTTACAACTTGGCAGAGACAAACCAGTATATTATGCTTTGGAAGGTTCTGTAGCTATAGCTGGTGC
 TGTTATTCGCTGGCTAAGAGACAATCTTGAATATAAAGACCTCAGAAGAAATGAAAACTTGCTAAA
 GAAGTAGGTACTTCTATGGCTGCTACTCGTCCCAGCATTTCGGGGTTATATGCACCTTATTGGGAGC
 CCAGCGCAAGAGGATAATCTGTGGACTCACTCAGTTCACCAATAAATGCCATATTGCTTTTGTGCTATT
 AGAAGCTGTTTTGTTTCCAACTCGAGAGATTTTGGATGCCATGAATCGAGACTGTGGAATCCACTCAGT
 CATTTCAGGTAGATGGAGGAATGACCAGCAACAAAATCTTATGCAGCTACAAGCAGACATTCTGTATA
 TACCAGTAGTGAAGCCCTCAATGCCGAAACCACTGCACTGGGTGCGGCTATGGCGGCAGGGGCTGCAGA
 AGGAGTCGGCGTATGGAGTCTCGAACCAGGATTTGTCTGCCGTACGATGGAGCGGTTTGAACCTCAG
 ATTAATGCGGAGGAAAGTGAATTCGTTATTCTACATGGAAGAAAGCTGTGATGAAGTCAATGGGTTGGG
 TTACAACCTCAATCCAGAAAGTGGTGACCCTAGTATCTTCTGTAGTCTGCCCTTGGGCTTTTTTATAGT
 GAGTAGCATGGAATGTTAATCGGAGCAAGGTACATCTCAGGTATTCCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG225948 representing NM_001128127
 Red=Cloning site Green=Tags(s)

MAASKKAVLGPLVGAVDQGTSSSTRFLVFNSKTAELL SHHQVEIKQEFREGWVEQDPKEILHSVYECIEK
 TCEKLGQLNIDISNIKAIGVSNQRETTVVWDKITGEPLYNVAVVWLDLRTQSTVESLSKRIPGNNNFVKSK
 TGLPLSTYFSAVKLRWLLDNVRKVQKAVEEKRALFGTIDSWLIWLSLGGVNGGVHCTDVTNASRTMLFNI
 HSLEWDKQLCEFFGIPMEILPNVRSSEIYGLMKAGALEGVPI SGCLGDQSAALVQMCQFQIGQAKNTYG
 TGCFLCNTGHKCVFSDHGLLTTVAYKLRDTPVYVALEGSVAIAGAVIRWLRDNLGIKTSSEEIEKLAK
 EVGTSYGCYFVPAFSGLYAPYWEPSARGIICGLTQFTNKCHIAFAALEAVCFQTREILDAMNRDCGIPLS
 HLQVDGGMTSNKILMQLQADILYIPVVKPSPMETTALGAAMAAGAAEGVGVWSLEPEDLSAVTMERFEPQ
 INAESEIRYSTWKKAVMKSMGWVTTQSPESGDPISIFCSLPLGFFIVSSMVMLIGARYISGIP

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

ACCN:	NM_001128127
ORF Size:	1659 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_001128127.2 , NP_001121599.1
RefSeq Size:	3707 bp
RefSeq ORF:	1662 bp
Locus ID:	2710
UniProt ID:	P32189
Cytogenetics:	Xp21.2
Protein Families:	Druggable Genome
Protein Pathways:	Glycerolipid metabolism, Metabolic pathways, PPAR signaling pathway
Gene Summary:	The protein encoded by this gene belongs to the FGGY kinase family. This protein is a key enzyme in the regulation of glycerol uptake and metabolism. It catalyzes the phosphorylation of glycerol by ATP, yielding ADP and glycerol-3-phosphate. Mutations in this gene are associated with glycerol kinase deficiency (GKD). Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2011]