

Product datasheet for **MG227074**

Gck (NM_010292) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gck (NM_010292) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Gck
Synonyms:	Gk; GLK; Gls006; HK4; HKIV; Hlb62; HXKP; MODY2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG227074 representing NM_010292
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTGGATGACAGAGCCAGGATGGAGGCCACCAAGAAGGAAAAGGTAGAGCAGATCCTGGCAGAGTTCC
 AGCTGCAGGAGGAAGACCTGAAGAAGGTGATGAGCCGGATGCAGAAGGAGATGGACCGTGGCCTGAAGCT
 GGAGACCCATCAGGAGGCCAGTGTAAAGATGTTGCCACCTACGTGCGTTCACCCAGAAAGGCTCAGAA
 GTTGGAGACTTTCTCCTTAGACCTGGGAGGAACCAACTTCAGGGTGTGCTGGTAAAAGTGGGGGAGG
 GGGAGGCAGGACAGTGGAGCGTGAAGACGAAACACCAGATGTATTCCATCCCCGAGGACGCCATGACGGG
 CACTGCGGAGATGCTCTTTGACTACATCTCTGAGTGCATCTCTGACTTCTGGACAAGCATCAGATGAAA
 CACAAGAACTACCCCTGGGCTCACCTTCTCCTTCCCTGTAAGGCACGAAGACATAGACAAGGGCATCC
 TGCTCAACTGGACCAAGGGCTTCAAGGCCTCCGGAGCAGAAGGGAACAACATCGTGGGACTTCTCCGAGA
 TGCTATCAAGAGGAGAGGGGACTTTGAGATGGATGTGGTGGCAATGGTGAATGACACGGTGGCCACAATG
 ATCTCCTGCTACTATGAAGACCCCAATGTGAGGTCGGCATGATTGTGGGCACCGGCTGCAACGCCTGCT
 ACATGGAGGAGATGCAGAATGTGGAGCTGGTGGAAAGGCGATGAGGGGCGCATGTGTGTCAACACAGAGTG
 GGGCGCCTTCGGGAACCTCCGGTGAAGTGGACGAGTTTCTCCTGGAGTACGACCGGATGGTGGATGAGAGC
 TCAGTGAACCCCGGTGAGCAGCTGTACGAAAAGATCATTGGCGGAAAGTACATGGGCGAGCTGGTACGAC
 TTGTGCTGCTCAAGCTGGTAGAGGAGAATCTTCTGTTCCACGGAGAGGCCCTCAGAGCAGCTGCGCACACG
 TGGTGTCTTTGAGACCCGTTTGTGTGCGAGGTGGAGAGCGACTCTGGGGACCGAAGGCAGATCCTTAAC
 ATCCTGAGCACTCTGGGCCTTCGACCCTCTGTGCGGACTGCGACATTGTGCGCCGTGCCTGTGAAAGCCG
 TGTCACACTCGCGCCGCCACATGTGCTCAGCAGGACTAGCGGGGGTCATAAATCGCATGCGCGAAAGCCG
 CAGTGAGGACGTGATGCGCATCACGGTGGGCGTGGATGGCTCCGTGTACAAGCTGCACCCGAGCTTCAAG
 GAGCGGTTTTACGCCAGTGTGCGCAGGCTGACACCCAAGTGCAGAAATCACCTTATTGAATCAGAGGAGG
 GCAGCGCAGGGGAGCCGACTGGTCTCTGCGGTGGCCTGCAAGAAGGCTTGCATGCTGGGCCAG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG227074 representing NM_010292
 Red=Cloning site Green=Tags(s)

MLDDRARMEATKKEKVEQILAEFQLQEEDLKKVMSRMQKEMDRGLKLETHQEASVKMLPTYVVRSTPEGSE
 VGDFLSLDLGGTNFRVMLVKVGEAGEQWSVKTKHQMYSIPEDAMTGAEMLFDYISECISDFLDKHQMK
 HKKLPLGFTTFFPVRHEDIDKGILLNWTGFKASGAEGNNIVGLLRDAIKRRGDFEMDVVAMVNDTVATM
 ISCYEDRQCEVGMIVGTGCNACYMEEMQNVELVEGDEGRMCVNTIEWGAFGNSGELDEFLLLEYDRMVDES
 SVNPGQQLYEKIIIGGKYMGEVRLVLLKLVEENLLFHGEASEQLRTRGAFETRFVSQVESDSGDRRQILN
 ILSTLGLRPSVADCDIVRRACESVSTRAAHMCSAGLAGVINRMRESRSEDYMRITVGVGDSVYKLPKHSFK
 ERFHASVRRLLTPNCEITFIESEEGSGRGAALVSAVACKKACMLGQ

TRTRPLE – GFP Tag – V

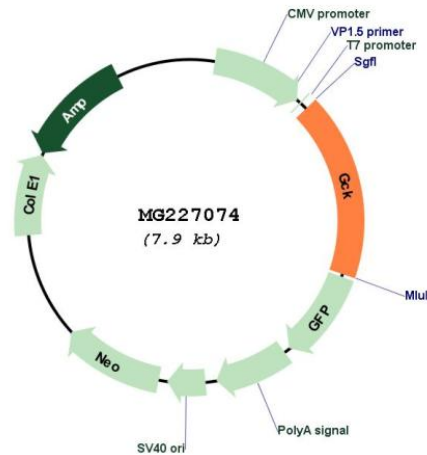
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_010292

ORF Size: 1395 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:	<u>NM_010292.5</u> , <u>NP_034422.2</u>
RefSeq Size:	2245 bp
RefSeq ORF:	1398 bp
Locus ID:	103988
UniProt ID:	<u>P52792</u>
Cytogenetics:	11 3.88 cM
Gene Summary:	Catalyzes the initial step in utilization of glucose by the beta-cell and liver at physiological glucose concentration. Pancreatic glucokinase plays an important role in modulating insulin secretion. Hepatic glucokinase helps to facilitate the uptake and conversion of glucose by acting as an insulin-sensitive determinant of hepatic glucose usage.[UniProtKB/Swiss-Prot Function]