

Product datasheet for **RG214133**

DGKG (NM_001080745) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DGKG (NM_001080745) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	DGKG
Synonyms:	DAGK3; DGK-GAMMA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG214133 representing NM_001080745
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGTGAAGAACGGTGGGTCTCCCTCACTCCAGAAGAATTTGACCAACTCCAGAAATATTCAGAATATT
 CCTCCAAGAAGATAAAAGATGCCTTGACTGAATTTAATGAGGGTGGGAGCCTCAAACAATATGACCCACA
 TGAGCCGATTAGCTATGATGTCTTCAAGCTGTTTCATGAGGGCGTACCTAGAGGTGGACCTTCCCCAGCCA
 CTGAGCACTCACCTCTTCTGGCCTTCAGCCAGAAGCCCAGACACGAGACCTCTGACCACCCGACGGAGG
 GAGCCAGCAACAGTGAGGCCAACAGCGCAGATACTAATATACAGAATGCAGATAATGCCACCAAAGCAGA
 CGAGGCCCTGTGCCCTGATACTGAATCAAATATGGCTGAGAAGCAAGCACCAGCTGAAGACCAAGTGGCT
 GCGAGCCCCCTGGAACCCCCCGTCCCTCGGTCTTCAAGCTCGGAATCCCCAGTGGTGTACCTGAAGGATG
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 TGATTCAGATGAGAACGGTCTCCTGGACCAAGCGGAGATGGATTGCATTGTCAACCAAATGCTGCATATT
 GCCCAGTACCTGGAGTGGGATCCACAGAGCTGAGGCCTATATTGAAGGAGATGTGCAAGGGATGGACT
 ACGACCCGGGACGGCTTTGTGTCTCTACAGGAATGGGTCCATGGAGGGATGACCACCATCCCATTGCTGGT
 CCTCTGGGGATGGATGACTCTGGCTCCAAGGGGGATGGGCGCACGCCTGGACCATGAAGCACTTCAAG
 AAACCAACCTACTGCAACTTCTGCCATATCATGCTCATGGGCGTCCGCAAGCAAGGCCTGTGCTGCACTT
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 GACCACATCTTACTGCCACCTCCATATGCCCCATCACCCGGGACAGGCCAGGTGAGAAGTCTGATGGCT
 GCGTGTCCGCCAAGGGCGAACTTGTTCATGCAGTATAAGATCATCCCCACCCCGGGTACCCACCCCTGCT
 GGTCTTGGTGAACCCCAAGAGTGGAGGGAGACAAGGAGAAAGAATTCTTCGGAAATTCACCTATCTGCTC
 AACCCCAAAACAAGTTTTCAACCTGGACAATGGGGGCCTACTCCAGGGTTGAACTTTTTCCGTGATACTC
 CAGACTCCGTGTTTTGGCCTGTGGTGGAGATGGGACAGTTGGCTGGATTTTGGATTGCATTGATAAGGC
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 CGCTGGGAGGAGGTTATGAAGGGGCAGCTTGACAAAAATCCTGAAAGACATTGAGCAGAGCCCCTTGG
 TGATGCTGGACCCTGGCATCTGGAAGTCATCCCAGAGAGGAAGTGAAAACGGGGACCAGGTCCCATA
 CAGCATCATGAACAATATTTCTCCATTGGTGTGGACGCTTCCATTGCACACAGATTCCATGTGATGAGA
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 CCTGAGCAACATCTTCTGGAAGGCATTGCCATTCCTCAACATTCCCAGCATGTACGGAGGCCAATCTC
 TGGGGAGAAAAACAAGAAGAACCGGGCTGTGATCCGGGAAAGCAGGAAGGGTGTCACTGACCCCAAAGAAC
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 GGGGCAGATCTACACCGCCTGAAGAGTGCAGGCAGGAGGCTGGCCAGTGCCTCTGTACCATCAGG
 ACAAAACAAGCTGCTGCCAATGCAAGTGGATGGAGAACCCTGGATGCAGCCATGTTGCACGATTAATA
 CTCACAAGAACCAAGCGCCATGATGATGGGGCCTCCCCAGAAGAGCAGCTTCTTCTCGTTGAGAAGGAA
 GAGCCGTTCAAAGAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG214133 representing NM_001080745
 Red=Cloning site Green=Tags(s)

MGEERWVSLTPEEFDQLQKYSEYSSKKIKDALTEFNEGGSLKQYDPHEPISYDVFKLFMRAYLEVDLPQP
 LSTHLFLAFSQKPRHETSDHPTEGASNSEANSADTNIQNADNATKADEACAPDTESNMAEKQAPAEDQVA
 ASPLEPPVPRSSSESPPVYLKDVVVCYL S LLETGRPQDKLEFMFRLYDSDENGLLDQAEMDCIVNQLHI
 AQYLEWDPTELRPILKEMLQGM DYDRDGFVSLQEWHVGGMTTIPLLVLLGMDDSGSKGDRHAWTMKHF
 KPTYCNFCHIMLMGVRKQGLCCTYCKYTVHERCVSKNIPGCVKTYSKAKRSGEFHRKCELSLTDGGELR
 DHILLPTSICPITRDRPGEKSDGCVSAK GELVMQYKIIPTPGTHPLLVLVNP KSGRQGERILRKFHYLL
 NPKQVFNLDNGGPTPLNFFRDTPDFRVLACGGDGTGVWILDCIDKANFAKHPVAVLPLGTGNDLARCL
 RWGGGYEGGSLTKILKDIEQSPLVMLDRWHLEVIPREEVNGDQVPYSIMNNYFSIGVDASIAHRFHVMR
 EKHPEKFN SRMKNKLWYFEFGTSETFAATCKKLHDHIELECDG VGVDL SNIFLEGIAILNIPSMYGGTNL
 WGENKKNRAVIRESRKGVTPKELKFCVQDLS DQLLEVVGLEGAMEMGQIYTGLKSAGRRLAQCASVTIR
 TNKLLPMQVDGEPWMPQCCTIKITHKNQAPMMMGPPQKSSFFSLRRKSRSKD

TRTRPLE - GFP Tag - V

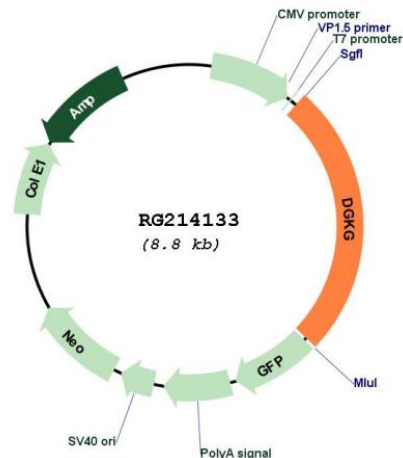
Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_001080745

ORF Size: 2256 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:

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_001080745.1](#), [NP_001074214.1](#)

RefSeq Size: 5701 bp

RefSeq ORF: 2259 bp

Locus ID: 1608

UniProt ID: [P49619](#)

Cytogenetics: 3q27.2-q27.3

Protein Families: Druggable Genome

Protein Pathways: Glycerolipid metabolism, Glycerophospholipid metabolism, Metabolic pathways, Phosphatidylinositol signaling system

Gene Summary: This gene encodes an enzyme that is a member of the type I subfamily of diacylglycerol kinases, which are involved in lipid metabolism. These enzymes generate phosphatidic acid by catalyzing the phosphorylation of diacylglycerol, a fundamental lipid second messenger that activates numerous proteins, including protein kinase C isoforms, Ras guanyl nucleotide-releasing proteins and some transient receptor potential channels. Diacylglycerol kinase gamma has been implicated in cell cycle regulation and in the negative regulation of macrophage differentiation in leukemia cells. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]