OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC211233

DGKB (NM_145695) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DGKB (NM_145695) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DGKB
Synonyms:	DAGK2; DGK; DGK-BETA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC211233 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGACAAACCAGGAAAAATGGGCCCACCTCAGCCCTTCGGAATTTTCCCAACTTCAGAAATATGCTGAGT
ATTCTACAAAGAAATTAAAGGATGTTCTTGAAGAATTCCATGGTAATGGTGTGCTTGCAAAGTATAATCC
TGAAGGGAAACAAGACATTCTTAACCAAACAATAGATTTTGAAGGTTTCAAACTATTCATGAAGACATTC
CTGGAAGCCGAGCTTCCTGATGATTTCACTGCACACCTTTTCATGTCATTTAGCAACAAGTTTCCTCATT
CTAGTCCAATGGTAAAAAGTAAGCCTGCTCTCCTATCAGGCGGTCTGAGAATGAATAAAGGTGCCATCAC
CCCTCCCCGGACTACTTCTCCTGCAAATACGTGTTCCCCAGAAGTAATCCATCTGAAGGACATTGTCTGT
TACCTGTCTCTGCTTGAAAGAGGAAGACCTGAGGATAAGCTTGAGTTTATGTTTCGCCTTTATGACACGG
ATGGGAATGGCTTCCTGGACAGCTCGGAGCTAGAAAATATCATCAGTCAGATGATGCATGTTGCAGAATA
CCTTGAGTGGGATGTCACTGAACTTAATCCAATCCTCCATGAAATGATGGAAGAAATTGACTATGATCAT
GATGGAACCGTGTCTCTGGAGGAATGGATTCAAGGAGGAATGACAACGATTCCACTTCTTGTGCTCCTGG
GCTTAGAAAATAACGTGAAGGATGATGGACAGCACGTGTGGCGACTGAAGCACTTTAACAAACCTGCCTA
TTGCAACCTTTGCCTGAACATGCTGATTGGCGTGGGGAAGCAGGGCCTCTGCTGTTCCTTCTGCAAGTAC
ACAGTCCATGAGCGCTGTGTGGCTCGAGCACCTCCCTCTTGCATCAAGACCTATGTGAAGTCCAAAAGGA
ACACTGATGTCATGCACCATTACTGGGTTGAAGGTAACTGCCCAACCAAGTGTGATAAGTGCCACAAAAC
TGTTAAATGTTACCAGGGCCTGACAGGACTGCATTGTGTTTGGTGTCAGATCACACTGCATAATAAATGT
GCTTCTCATCTAAAACCTGAATGTGACTGTGGACCTTTGAAGGACCATATTTTACCACCCACAACAATCT
GTCCAGTGGTACTGCAGACTCTGCCCACTTCAGGAGTTTCAGTTCCTGAGGAAAGACAATCAACAGTGAA
AAAGGAAAAGAGTGGTTCCCAGCAGCCAAACAAAGTGATTGACAAGAATAAAATGCAAAGAGCCAACTCT
GTTACTGTAGATGGACAAGGCCTGCAGGTCACTCCTGTGCCTGGTACTCACCCACTTTTAGTTTTTGTGA
ACCCCAAAAGTGGTGGAAAACAAGGAGAACGAATTTACAGAAAATTCCAGTATCTATTAAATCCTCGTCA
GGTTTACAGTCTTTCTGGAAATGGACCAATGCCAGGGTTAAACTTTTTCCGTGATGTTCCTGACTTCAGA
GTGTTAGCCTGTGGTGGAGATGGAACCGTGGGCTGGGTTTTGGATTGCATAGAAAAGGCCAATGTAGGCA
AGCATCCTCCAGTTGCGATTCTGCCTCTTGGGACTGGCAATGATCTAGCAAGATGCCTGCGATGGGGAGG
AGGTTACGAAGGTGAGAATCTGATGAAAATTCTAAAAGACATTGAAAACAGCACAGAAATCATGTTGGAC
AGGTGGAAGTTTGAAGTCATACCTAATGACAAAGATGAGAAAGGAGACCCAGTGCCTTACAGTATCATCA
ATAATTACTTTTCCATTGGCGTGGATGCCTCCATTGCACACAGATTCCACATCATGAGAGAAAAACACCC
AGAGAAATTCAACAGTAGAATGAAGAACAAATTTTGGTATTTTGAGTTTGGCACATCTGAAACTTTCTCA
GCCACCTGCAAGAAGCTACATGAATCTGTAGAAATAGAATGTGATGGAGTACAGATAGATTTAATAAACA
TCTCTCTGGAAGGAATTGCTATTTTGAATATACCAAGCATGCATGGAGGATCCAATCTTTGGGGAGAGTC
TAAGAAAAGACGAAGCCATCGACGAATAGAGAAAAAAGGGTCTGACAAAAGGACCACCGTCACAGATGCC
AAAGAGTTGAAGTTTGCAAGTCAAGATCTCAGTGACCAGCTGCTGGAGGTGGTCGGCTTGGAAGGAGCCA
TGGAGATGGGGCAAATATACACAGGCCTGAAAAGTGCTGGCCGGCGGCTGGCTCAGTGCTCCTGCGTGGT
CATCAGGACGAGCAAGTCTCTGCCAATGCAAATTGATGGGGAGCCATGGATGCAGACCCCATGCACAGTG
AGTACAGAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC211233 protein sequence
Red=Cloning site Green=Tags(s)

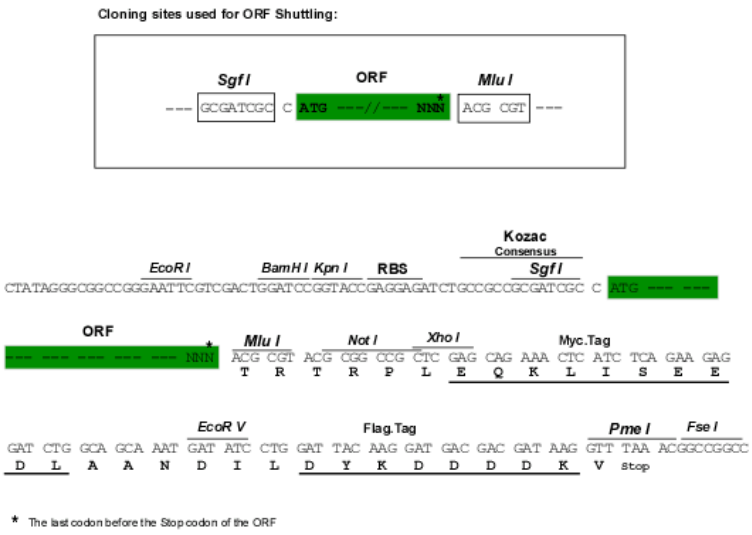
MTNQEKWAHLSPSEFSQLQKYAEYSTKKLKDVLEEFHGNGVLAKYNPEGKQDILNQTIDFEGFKLFMKTF
LEAELPDDFTAHLFMSFSNKFPHSSPMVKSKPALLSGGLRMNKGAITPPRTTSPANTCSPEVIHLKDIVC
YLSLLERGRPEDKLEFMFRLYDTDGNGFLDSSELENIISQMMHVAEYLEWDVTELNPILHEMMEEIDYDH
DGTVSLEEWIQGGMTTIPLLVLLGLENNVKDDGQHVWRLKHFNKPAYCNLCLNMLIGVGKQGLCCSFCKY
TVHERCVARAPPSCIKTYVKSKRNTDVMHHYWVEGNCPTKCDKCHKTVKCYQGLTGLHCVWCQITLHNKC
ASHLKPECDCGPLKDHILPPTTICPVVLQTLPTSGVSVPEERQSTVKKEKSGSQQPNKVIDKNKMQRANS
VTVDGQGLQVTPVPGTHPLLVFVNPKSGGKQGERIYRKFQYLLNPRQVYSLSGNGPMPGLNFFRDVPDFR
VLACGGDGTVGWVLDCIEKANVGKHPPVAILPLGTGNDLARCLRWGGGYEGENLMKILKDIENSTEIMLD
RWKFEVIPNDKDEKGDPVPYSIINNYFSIGVDASIAHRFHIMREKHPEKFNSRMKNKFWYFEFGTSETFS
ATCKKLHESVEIECDGVQIDLINISLEGIAILNIPSMHGGSNLWGESKKRRSHRRIEKKGSDKRTTVTDA
KELKFASQDLSDQLLEVVGLEGAMEMGQIYTGLKSAGRRLAQCSCVVIRTSKSLPMQIDGEPWMQTPCTV
STE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6373_d07.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_145695

ORF Size: 2319 bp

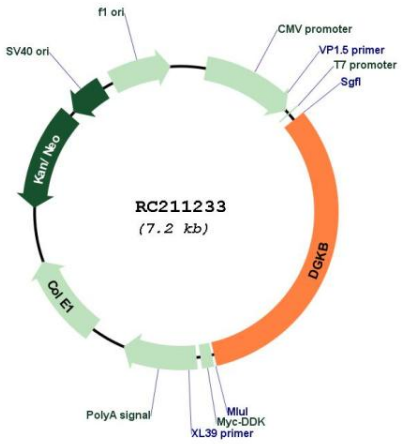
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

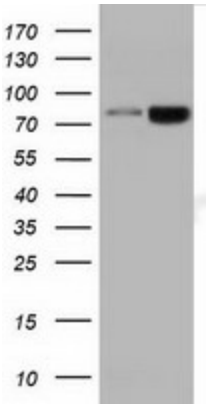
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_145695.2, NP_663733.1
RefSeq Size:	3360 bp
RefSeq ORF:	2322 bp
Locus ID:	1607
UniProt ID:	Q9Y6T7
Cytogenetics:	7p21.2
Protein Families:	Druggable Genome
Protein Pathways:	Glycerolipid metabolism, Glycerophospholipid metabolism, Metabolic pathways, Phosphatidylinositol signaling system
MW:	87.1 kDa
Gene Summary:	Diacylglycerol kinases (DGKs) are regulators of the intracellular concentration of the second messenger diacylglycerol (DAG) and thus play a key role in cellular processes. Nine mammalian isotypes have been identified, which are encoded by separate genes. Mammalian DGK isozymes contain a conserved catalytic (kinase) domain and a cysteine-rich domain (CRD). The protein encoded by this gene is a diacylglycerol kinase, beta isotype. Several alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Apr 2017]

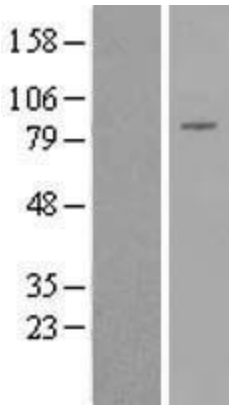
Product images:



Circular map for RC211233



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY DGKB (Cat# RC211233, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-DGKB(Cat# [TA501381]). Positive lysates [LY407898] (100ug) and [LC407898] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY407898]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211233 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).