

## Product datasheet for **MR210661**

### Dgkg (NM\_138650) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Dgkg (NM_138650) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Dgkg
Synonyms:	90kDa; 2900055E17Rik; AI854428; Dagk3; E430001K23Rik; mKIAA4131
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>MR210661 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGAGCGAAGAACAATGGGTCTCTCTCTCATCAGAAGAATTTGATCAACTCCAGAAATCTCTGAATATT  
 CCTCCAAAAGATAAAAGATGTATTGGCTGAGTTAATGAAGGTGGAAGCCTCAGGCAGTATGACCCACA  
 CAAGCCCATTAGCTATGATGTCTTCAAGCTGTTTATGAGGGCATACCTGGAGGTGGACCTTCCTCAGCCA  
 CTGAGCACACACCTCTTCTGGCCTTCAGCCAGAACCCAGACAAGAGACACCTGACCATCCAAAGGAGG  
 GGGCCAGCAGTAGTGAGCCCAATGTCTCAGATTATAATTCGGATAATGCTGCCAAAGCAGATGAGGCCTG  
 TGCTCCAGACACTGAATCAAAAACAATAAGACACAAGCACCATCTAAAGAACTAGAGGCTGCAGCCCCA  
 TGGGAAGACCCAGGTGCTCTGGCTTCAAGCTCAGATGCTCCCGTAGTGTACCTGAAGGATGTCGTGTGT  
 ACTTGTCCCTGATGGAGACCGGGCGACCTCAGGATAAGCTAGAATTCATGTTTCGTCTCTATGATTCGGA  
 TGAATGGACTCCTGGACCAAGCGGAGATGGATCAGATTGTGAGCCAAATGCTGCACGTTGCCAGTAC  
 CTGGAATGGGATCCACAGAGCTCAGACCTATACTGAAGGAGATGCTGCAAGGCATGGACTATGACAAGG  
 ATGGCTTCGTGTCTTACAGGAGTGGATCAACGGGGGAATGACCACCATCCCTTTGCTGGTCCCTCTGGG  
 AATGGATGACTCTGGCTCCAAGGGCGATGGGAGGCATGCCTGGACCTGAAGCACTTCAAGAAGCCCACT  
 TACTGCAACTTCTGCCGCGCCATGTCTGATGGGTGTTGGGAAGCAAGGCCTGTGCTGCATCTACTGTAAT  
 ATACAGTCCACCAACGCTGTGTATCCAAAACCATTCATGGATGTGTGAAAAAACTCCAAAGCCAAAAG  
 GAGTGGCAGGTGATGCAGCATGCGTGGTGGGAAGGAACTCCTCCGCAAGTGTGACCGGTGCCACAAA  
 AGTATCAAGTGTACAGAGTGTACCGCGCGGCACTGCGTGTGGTGGCGGATGACGTTTACCCGCAAT  
 GTGAATATCGACAGTGTGCGACGGTGGGAACCTCAAAGACCACATTTTGTGCTGCCTACCTCATATGCCC  
 CGTCTCCGGAGACCGGCAAGGAGGGAAGTCCGATGGCAGTGTGGCCGCAAGGGTGAACCTGTAACCTCAG  
 TATAAGATCATCCCTAGCCCGGGACGCATCCCTGCTGGTCTGGTGAACCCCAAGAGTGGAGGAAGAC  
 AAGGAGAAAGAATTTCTCGGAAATTTCACTACCTGCTCAACCCGAAACAAGTTTTCAACCTGGACATGG  
 GGGACCTACACCAGGATTGAACCTTTTTCATGATACCCAGACTTCCGTGTTCTTGCCTGTGGCGGAGAT  
 GGGACCGTTGGCTGGATTTTGGATTGCATTGATAAGGCTAACTTCACAAAGCACCCACCGGTGGCTGTCC  
 TGCTCTTGGAACAGGAATGACCTCGCACGATGCCTCCGCTGGGAGGAGGTTACGAAGGGGCGAGCTT  
 GACCAAAATCCTGAAGGAAATTTAACAGAGCCCTTGGTGTGCTGGACCGTTGGTACCTAGAGGTCATG  
 CCCAGGGAAGAGGTGGAGAATGGAGACCAAGTCCCATACAACATCATGAACAATATTTCTCCATTGGTG  
 TGGATGCTTCAATTGCACACAGATTCCATATGATGAGAGAGAAACACCCTGAAAAATTTCAACAGCAGGAT  
 GAAGAACAAGCTGTGGTATTTTGAATTTGGTACCTCGGAAACCTTTCAGCCACCTGCAAGAAACTCCAT  
 GACCACATAGAGCTGGAGTGTGACGGAGTTGAGGTGGATCTGAGCAACATCTTCTGGAAGGCATCGCCA  
 TTCTTAATATTTCCAGCATGTACGGAGGCCAATCTCTGGGGAGAAACCAAGAAGAACCGGGCTGTGAT  
 CCGGAAAGCAGGAAGAGCGTACAGACCCAAAGGAGCTGAAATGCTGTGTCCAAGACCTCAGCGATCAG  
 CTCCTTGAAGTGGTGGTCTAGAGGGAGCCATGGAGATGGGACAGATCTACACTGGCCTGAAGAGTGGCG  
 GCAGGAGACTGGCCAGTGTCTCTGTACCATTAGGACTAACAAAGCTTCTGCCGATGCAAGTAGACGG  
 AGAGCCCTGGATGCAGCCACAATGCACGATTAATACTCACAAAAACAGGCACCTATGATGATGGGG  
 CCTCCCAAGAAGAGCAGCTTTTTTCTCTGAGGAGGAAAAGCCGTTCAAAAGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

## Protein Sequence:

&gt;MR210661 protein sequence

Red=Cloning site Green=Tags(s)

MSEEQWVSLSSEEFDQLQKYSEYSSKKIKDVLAEFNEGGSLRQYDPHKPISYDVFKLFMRAYLEVLDLPQL  
LSTHLFLAFSQKPRQETPDHPKEGASSSEPNVSDYNSDNAAKADEACAPDTESKTTKTQAPSKELEAAAP  
WEDPGALASSSDAPVVYLKDVVCYLSL METGRPQDKLEFMFRLYDSDENGLLDQAEMDQIVSQMLHVAQY  
LEWDPTELRPILKEMLQGM DYDKDGFVSLQEWINGM TTIPLLVLLGMDDSGSKGDRHAWTLKHFKKPT  
YCNFCRAMLMGVGKQGLCCIYCKYTVHQRCVSKTIHGCVKTN SKAKRSGEVMQHAWVEGNSSVKCDRCHK  
SIKCYQSVTARHCVWCRMTFHRKCELSTVCDGGELKDHILLPTSICPVSGDRQGGKSDGSVAAKGELVTQ  
YKIIPSPGTHPLLVLVNP KSGGRQGERILRKFHYLLNPEQVFNL DNGGPTPGLNFFHDTPDFRVLACGGD  
GTVGWILDCIDKANFTKHPPVAVLPLGTGNDLARCLRWGGGYEGGSLTKILKEIEQSPLVMLDRWYLEVM  
PREEVENGDQVPYNI MN NYFSIGVDASIAHRFHMMREKHPEKFNSRMKNKLWYFEFGTSETFAATCKKLH  
DHIELECDGVEVDLSNIFLEGIAILNIPSMYGGTNLWGETKKNRAVIRESRKSVTDPKELKCCVQDLSQ  
LLEVVGLEGAMEMGQIYTGLKSAGRRLAQCSSVTIRTNKLLPMQVDGEPWMQPQCTIKITHKNQAPMMMG  
PPQKSSFFSLRRKSRSKD

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

## Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM\_138650

ORF Size: 2367 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\\_138650.2](#)

**RefSeq Size:** 5521 bp

**RefSeq ORF:** 2367 bp

**Locus ID:** 110197

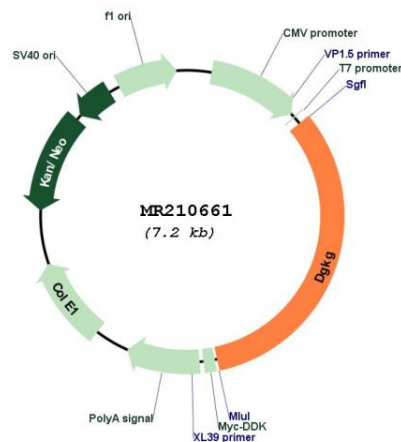
**UniProt ID:** [Q91WG7](#)

**Cytogenetics:** 16 13.37 cM

**MW:** 88.5 kDa

**Gene Summary:** Diacylglycerol kinase that converts diacylglycerol/DAG into phosphatidic acid/phosphatidate/PA and regulates the respective levels of these two bioactive lipids (PubMed:32033984). Thereby, acts as a central switch between the signaling pathways activated by these second messengers with different cellular targets and opposite effects in numerous biological processes (PubMed:32033984). Has no apparent specificity with regard to the acyl compositions of diacylglycerol (By similarity). Specifically expressed in the cerebellum where it controls the level of diacylglycerol which in turn regulates the activity of protein kinase C gamma (PubMed:32033984). Through protein kinase C gamma, indirectly regulates the dendritic development of Purkinje cells, cerebellar long term depression and ultimately cerebellar motor coordination (PubMed:32033984).[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MR210661