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# Product datasheet for RR217349

## Dgkq (NM_001198804) Rat Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Dgkq (NM_001198804) Rat Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | Dgkq |
| **Synonyms:** | Dgkq |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |
| **Cell Selection:** | Neomycin |



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**ORF Nucleotide Sequence:**

>RR217349 representing NM_001198804
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGACGGCAGCCGAGTCCGGGGCCCGGACCTGGCCGGGCAGTGGTTCCCCACGTCTCGGCAGCCCGG
CCGGCAGCCCTGTGCTGGGCATCTCGGGCCGCGCACGCCCGGGGTCAGGGCCGGAGCGGACTGGCAGAGC
TATCGGCTCCGTAGCACCCGGCCACAGCTTTCGCAAGGTGACACTCACCAAGCCTACCTTCTGCCACCTC
TGCTCGGACTTCATCTGGGGATTGGCCGGCTTCCTGTGCGATGTCTGCAACTTCATGTCCCATGAGAAGT
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CTTTGGTTCCCTTGGTCTCTACAAGCGCAAGTTCTGTGTGGTCTGCCGCAAGAGCCTGGAGGTACCTGCG
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AGTGTCACCAGGATGGACAGCACGATTATGACACGTATCACCACCACTGGAGGGAGGGGAATCTGCCTTC
TGGTGCTCGATGTGAGGTCTGTAGGAAGACTTGTGGCTCCTCGGATGTGCTGGCTGGTGTACGCTGCGAG
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GCTCCATGGTACTGCCTCCTTCGTGTGTGCGCCTGTTGTCCCGAAACTTCAGCAAGATGCACTGCTTCCG
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ACCCCACATGTCTCCCTGTTTGTGGGTGGCCTGCCACCTGGCTTGTCCCCTCAGGATTACAGCAACCTGC
TGCATGAGGCCATGGCCACCAAAGCTGCTGTGGTGTCTGTGAGTCACGTCTACTCCTTACAAGGTGCGGT
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CTGTTGGAGGTGGTGGGTGTGACAGGTGTCGTGCACATGGGCCAGGTACAAGGTGGGCTGCGCTCTGGAA
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GCCCTGGATTCAGGCCCCAGGTCACATGATCATCTCTGCTACTGCACCTAAGGTTCACATGCTGAGGAAA
GCTAAGCAGAAGCCCAGGAAGGCTGGCGCCATCAGGGATACCCGAGTGGACACCTTGCCTGCTCCTGAGG
GCAATCCTTTA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

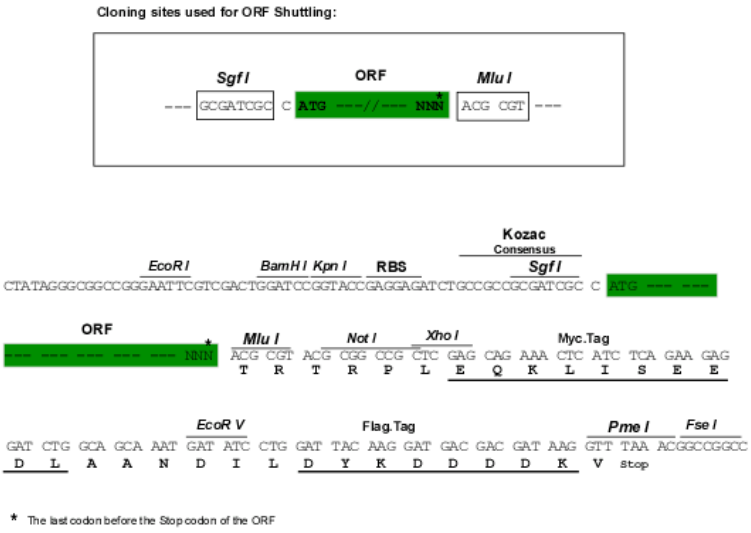
>RR217349 representing NM_001198804
Red=Cloning site Green=Tags(s)

MATAAESGARTWPGSGSPRLGSPAGSPVLGISGRARPGSGPERTGRAIGSVAPGHSFRKVTLTKPTFCHL
CSDFIWGLAGFLCDVCNFMSHEKCLKQVKTPCTSIAPSLVRVPVAHCFGSLGLYKRKFCVVCRKSLEVPA
FRCEVCELHVHPDCVPFACSDCRQCHQDGQHDYDTYHHHWREGNLPSGARCEVCRKTCGSSDVLAGVRCE
WCGVQAHSVCSTALTPECTFGRLRSMVLPPSCVRLLSRNFSKMHCFRIPETMVLELGDGDDGLDGSAAVG
TGREVSAATESTKQTLKIFDGNDSMRKNQFRLVTVSRLARNEEVMEAALRAYYINEDPKDFQLQALPLTL
LSGNAQALGKAGTTEEETSKDSGPGDSVPEAWVIRSLPRTQEILKIYPDWLKVGVAYVSIRVNSQSTARS
VVQEVLPLFGRQVEDQERFQLIEVLMSSRQVQRTVLVDEEPLLDRLRDIRQTSVRQASQTRFYVAEARAV
TPHVSLFVGGLPPGLSPQDYSNLLHEAMATKAAVVSVSHVYSLQGAVVLDVTCFAEAERLYMLARDTAVH
GRPLTALVLPDVLHTKLPPDCCPLLVFVNPKSGGLKGRELLCSFRKLLNPHQVFELTNGGPLPGFHLFSQ
VPCFRVLVCGGDGTVGWVLAALEETRRHLACPEPSVAILPLGTGNDLGRVLRWGAGYSGEDPFSVLVSVD
EADAVLMDRWTILLDAHEIDSTENNVVETEPPKIVQMNNYCGIGIDAELSLDFHQAREEEPGKFTSRFHN
KGVYVRVGLQKISHSRSLHKEIRLQVEQQEVELPSIEGLIFINIPSWGSGADLWGSDSDSRFEKPRIDDG
LLEVVGVTGVVHMGQVQGGLRSGIRIAQGSYFRVTLLKATPVQVDGEPWIQAPGHMIISATAPKVHMLRK
AKQKPRKAGAIRDTRVDTLPAPEGNPL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

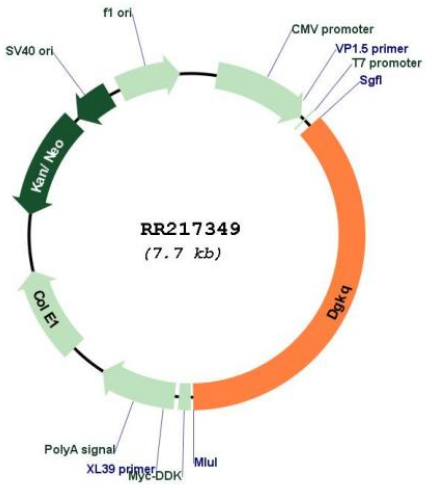
**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




* The last codon before the Stop codon of the ORF

Plasmid Map:

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|---|---|
| **ACCN:** | NM_001198804 |
| **ORF Size:** | 2811 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.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_001198804.1, NP_001185733.1 |
| **RefSeq Size:** | 4536 bp |
| **RefSeq ORF:** | 2814 bp |
| **Locus ID:** | 100361138 |
| **UniProt ID:** | D3ZEY4 |
| **Cytogenetics:** | 14p22 |

| | |
|---|---|
| **MW:** | 102.5 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:15337525). 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:15337525). Within the adrenocorticotropic hormone signaling pathway, produces phosphatidic acid which in turn activates NR5A1 and subsequent steroidogenic gene transcription (By similarity). Also functions downstream of the nerve growth factor signaling pathway being specifically activated in the nucleus by the growth factor (PubMed:15337525). Through its diacylglycerol activity also regulates synaptic vesicle endocytosis (By similarity).[UniProtKB/Swiss-Prot Function] |