

Product datasheet for RC223917

Deoxyguanosine kinase (DGUOK) (NM_080918) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Deoxyguanosine kinase (DGUOK) (NM_080918) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: Deoxyguanosine kinase
Synonyms: dGK; MTDPS3; NCPH; PEOB4
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC223917 representing NM_080918
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGCCGCGGGCCGCTCTTTCTAAGTCGGCTTCGAGCACCCCTTCAGTTCATGGCCAAGAGCCACTCG
 AGGGCGTTTCTCCTCCAGAGGCTGCACGCGGGCGCGGCCCGAAGGCTCTCCATCGAAGGCAACAT
 TGCTGTGGAAAGTCCACGTTTGTGAAGTTACTCAGAAAACCTACCCAGAATGGCAGTAGCTACAGAA
 CCTGTAGCAACATGGCAGAATATCCAGGCTGCTGGCACCCAAAAAGCCTGCACTGCCAAAGTCTGGAA
 ACTTGCTGGATATGATGTACCGGGAGCCAGCACGATGGTCTACACATTCCAGACATTTCTTTTTGAG
 CCGCTGAAAGTACAGCTGGAGCCCTTCCCTGAGAACTCTACAGGCCAGGAAGCCAGTACAGATCTTT
 GAGAGGCTGTGTACAGTACAGGCTCCACTTTGAGGCTCTGATGAACATTCCAGTGTGGTGTGGATG
 TCAATGATGATTTTCTGAGGAAGTAACCAAACAAGAAGACCTCATGAGAGAGGTAACACCTTTGTAAA
 GAATCTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC223917 representing NM_080918
 Red=Cloning site Green=Tags(s)

MAAGRLFLSRLRAPFSSMAKSPLEGVSSSRGLHAGRGPRLSIEGNIAVGKSTFVKLLTKTYPEWHVATE
 PVATWQNIQAAGTQKACTAQLGNLLDMMYREPARWSYTFQTFSLRSLKVLQLEPFPEKLLQARKPVQIF
 ERSVYSRDLHFEALMNIPVLVLDVNDDFSEEVTKQEDLMREVNTFVKNL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV



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Chromatograms: https://cdn.origene.com/chromatograms/mk6480_a10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_080918

ORF Size: 567 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_080918.3](#)

RefSeq Size: 880 bp

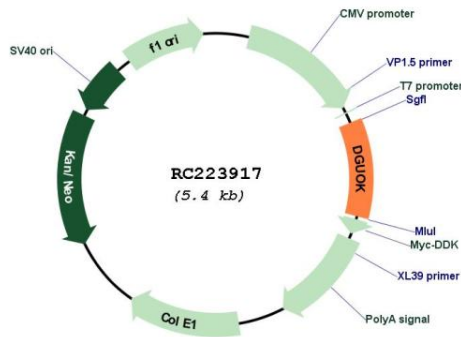
RefSeq ORF: 570 bp

Locus ID: 1716

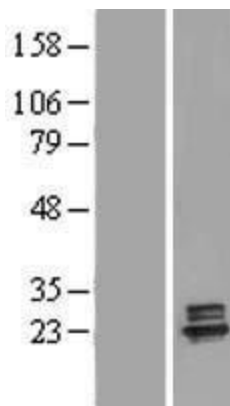
UniProt ID: [Q16854](#)
Cytogenetics: 2p13.1
Protein Families: Druggable Genome
Protein Pathways: Metabolic pathways, Purine metabolism
MW: 17.3 kDa

Gene Summary: In mammalian cells, the phosphorylation of purine deoxyribonucleosides is mediated predominantly by two deoxyribonucleoside kinases, cytosolic deoxycytidine kinase and mitochondrial deoxyguanosine kinase. The protein encoded by this gene is responsible for phosphorylation of purine deoxyribonucleosides in the mitochondrial matrix. In addition, this protein phosphorylates several purine deoxyribonucleoside analogs used in the treatment of lymphoproliferative disorders, and this phosphorylation is critical for the effectiveness of the analogs. Alternative splice variants encoding different protein isoforms have been described for this gene. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC223917



Western blot validation of overexpression lysate (Cat# [LY409003]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223917 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).