

## Product datasheet for **MG226409**

### **Dclk1 (NM\_019978) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Dclk1 (NM_019978) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Dclk1
Synonyms:	1700113D08Rik; 2810480F11Rik; AI836758; Clic; Click-I; CPG1; Cpg16; Dc; Dcamk; Dcamk11; Dcl; Dclk; mKIAA0369
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG226409 representing NM\_019978  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGTCGTTTCGGCAGAGATATGGAGTTGGAGCATTGTTGATGAGCGGGACAAGGCGCAGAGGTACAGCAGGG  
 GGTCCCGTGTGAATGGCCTGCCAGCCCCACACAGCGCCCACTGCAGCTTCTACCGCACCCGCACCCCT  
 GCAGACTCAGCTCCGAGAAGAAAGCCAAAGGTTTCGATTCTACAGAAATGGTGACCGCTACTTCAAA  
 GGAATTGTGATGCCATCTCCCCAGACCCTTCAGATCTTTCGAGGCCCTGCTGGCTGATTTGACCCGAA  
 CTCTCTCGGATAATGTGAATTTGCCAGGGGGTGAACCATCTACACCATCGATGGACTCAAGAAGAT  
 CTCCAGCCTGGACCAGCTGGTGAAGGTGAAAGCTATGTCTGCGGCTCCATCGAGCCCTTAAAGAAGCTG  
 GAGTACACCAAGAATGTGAACCCCACTGGTCACTGACGTCAGACCACTCAGCCTCCCGCAGTGT  
 CTTCTTTGGCCACTGCCAAGGTGGCCCTTCGGAGGTTCCGGAGAATAAGGATTTCAATCGACCCAAGCT  
 GGTCAACATCATCAGAAGTGGGGTGAAGCCACGGAAGGCTGTGAGATCTGCTGAACAAGAAGACGGCT  
 CACTCCTTCGAGCAGGTTCTCACTGACATTACCGACGCTATCAAGCTGGACTCCGGTGTGGTGAAGCGCC  
 TGTACACTCTGGATGGGAAGCAGGTGATGTGCCTTCAGGACTTTTTTGGTACGATGACATTTTTATTGC  
 ATGTGGACCAGAGAAGTCCGTTACCAGGATGATTTCTTGCTAGATGAAAGTGAATGTCGAGTGGTGAAA  
 TCAACTTCTTACACAAAATAGCATCAGCGTCCCGCAGAGGCACAACCAAGAGCCAGGACCTTCCCGGA  
 GAAGCAAGTCCCCAGCCTCCACCAGCTCAGTTAATGGAACCCCTGGTAGTCAGCTCTCTACTCCACGCTC  
 GGGCAAGTACCAAGTCCATCACCCAGCCAGGAAGCCTGCGGAAGCAGAGGATCTCTCAGCATGGC  
 GGCTCCTCGACTTCACTTTCATCCACTAAAGTTGTCAGCTCAATGGATGAGAATGATGGCCCTGGGAAG  
 GTGATGAGCTTGGGAGAAGGCACAGCTTGCAGAGGGGATGGAGGAGGGAAGAGTCTGAGGAAGCTTCCA  
 GATTCCTGCCACAATAACAGAGAGATACAAAGTCGGGAGAACAATAGGAGACGGAAATTTTGTGTGTC  
 AAGGAATGTATAGAGAGTGCAGTGTCTCGGGAGTATGCCCTGAAAATCATCAAGAAAAGCAAATGCCGAG  
 GCAAAGAGCACATGATCCAGAACGAGGTCTCCATCCTACGGAGGGTGAAGCACCCCAACATTGCTCCTCT  
 GATTGAAGAGATGGATGTGCCGACTGAACTGTATCTTGAATGGAATTAGTGAAGGGTGGAGACCTTTTC  
 GATGCCATCACCTCCACTAGCAAATACACAGAGAGAGATGCCAGCGGGATGCTGTACAACCTGGCCAGCG  
 CCATCAAATACCTGCACAGCCTGAACATCGTCCACCGTGACATCAAGCCAGAGAATCTGCTGGTGTATGA  
 GCACCAGGATGGCAGTAAGTCACTCAAGTTGGGTGACTTTGGCCTGGCCACAATTGTCGACGGCCCCCTG  
 TACACAGTCTGTGGCACCACAACATATGTGGCTCCAGAAATCATTGCAGAGACTGGATATGGCCTCAAGG  
 TGACATCTGGCAGCTGGCGTGATCACTTATATCCTGCTGTGTGGCTTCCCTCCGTTCCGTGGAAGTGG  
 GGATGACCAGGAGGTGCTTTTTGACCAGATCTTGATGGGCCAAGTGGACTTTCCATCTCCGTATTGGGAC  
 AATGTGTCAGATTCTGCTAAGGAGCTCATCAACATGATGCTGTTGGTTAACGTGGACCAGAGATTTTCAG  
 CCGTGCAGGTCCTTGAGCATCCCTGGGTTAATGATGATGGTCTCCAGAAAATGAGCATCAGCTGTCACT  
 AGCTGGCAAAAATCAAGAAGCATTTCACACAGGCCCAAGCCGAGCAGCACTGCAGCAGGAGTTTCTGTA  
 ATAGCAACCACCCTCTTGATAAGGAGAGGCAGGTTTTCCGACGAAGACGCAACCAGGATGTGAGGAGCC  
 GGTACAAGGCGCAGCCAGCTCCACCGAATTGAACTCGGAATCGGAGGACTACTCCCCAGCTCCTCTGA  
 GACTGTTGCTCCCCAATTCGCCCTTT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG226409 representing NM\_019978  
 Red=Cloning site Green=Tags(s)

MSFGRDMELEHFDERDKAQRYSRGSRVNGLPSPTHSAHCSFYRTRTLQTLSEKKAKKVRFYRNGDRYFK  
 GIVYAI SPDRFRSFEALLADL TRT L SDNVNLPQGVRTIYTDGLKKISSLDQLVEGESYVCGSIEPFKKL  
 EYTKNVNPNWSVNVKTTASARAVSSLATAKGGPSEVRENKDFIRPKLVTIIRSGVKPRKAVRILLNKKTA  
 HSFEQVLTDITDAIKLDSGVVKRLYTLDGKQVMCLQDFFGDDDFIACGPEKFRYQDDFLLDESECRVVK  
 STSYTKIASASRRGTTKSPGSPRRSKSPASTSSVNGTPGSQ LSTPRSGKSPSPSPSPGSLRKQRISQHG  
 GSSTLSSTKVCSSMDENDGPGEGDELGRRHSLQRGWRREESEEGFQIPATITERYKVGRTIGDGNFAVV  
 KECIERSTAREYALKI IKKSKCRGKEHMIQNEVILRRVKHPNIVLLIEEMDVPTELYLVMLVKGGDLF  
 DAITSTSKYTERDASGMLYNLASAIKYLHSLNIVHRDIKPENLLVYEHQDGSKSLKLGDFLATIVDGPL  
 YTVCGTPTYVAPEIIAETGYGLKVDIWAAGVITYILLCGFPPFRGSGDDQEVLFQDQILMGQVDFPSPYWD  
 NVSDSAKELINMMLLVNVDQRFSAVQVLEHPWVNDGLPENEHQLSVAGKIKKHFNTGPKPSSTAAGVSV  
 IATTALDKERQVFRRRRNQDVRSRYKAQPAPPELNSESEDYSPSSSETVRSNPSPF

TRTRPLE - GFP Tag - V

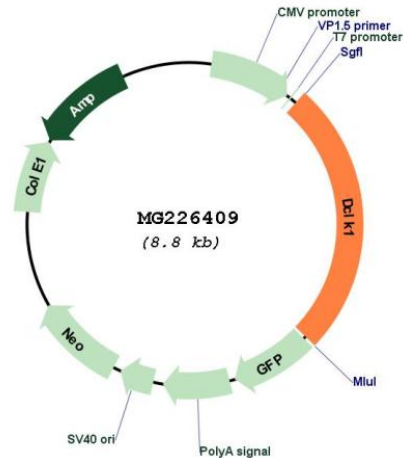
Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



## Plasmid Map:



ACCN: NM\_019978

ORF Size: 2268 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\\_019978.4](#)

RefSeq Size: 7865 bp

RefSeq ORF: 2271 bp

Locus ID: 13175

UniProt ID: [Q9JLM8](#)

**Cytogenetics:** 3 C

**Gene Summary:** This gene encodes a member of the protein kinase superfamily and the doublecortin family. The protein encoded by this gene contains two N-terminal doublecortin domains, which bind microtubules and regulate microtubule polymerization, a C-terminal serine/threonine protein kinase domain, which shows substantial homology to Ca<sup>2+</sup>/calmodulin-dependent protein kinase, and a serine/proline-rich domain in between the doublecortin and the protein kinase domains, which mediates multiple protein-protein interactions. The microtubule-polymerizing activity of the encoded protein is independent of its protein kinase activity. The encoded protein is involved in several different cellular processes, including neuronal migration, retrograde transport, neuronal apoptosis and neurogenesis. This gene is up-regulated by brain-derived neurotrophic factor and associated with memory and general cognitive abilities. Multiple transcript variants generated by two alternative promoter usage and alternative splicing have been found, but the biological validity of some variants has not been determined. These variants encode different isoforms, which are differentially expressed and have different kinase activities. [provided by RefSeq, Sep 2010]