

## Product datasheet for **MC221361**

### **Dclk1 (NM\_019978) Mouse Untagged Clone**

#### **Product data:**

<b>Product Type:</b>	Expression Plasmids
<b>Product Name:</b>	Dclk1 (NM_019978) Mouse Untagged Clone
<b>Tag:</b>	Tag Free
<b>Symbol:</b>	Dclk1
<b>Synonyms:</b>	1700113D08Rik; 2810480F11Rik; AI836758; Clic; Click-I; CPG1; Cpg16; Dc; Dcamk; Dcamkl1; Dcl; Dclk; mKIAA0369
<b>Vector:</b>	pCMV6-Entry (PS100001)
<b>E. coli Selection:</b>	Kanamycin (25 ug/mL)
<b>Cell Selection:</b>	Neomycin



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**Fully Sequenced ORF:** >MC221361 representing NM\_019978  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGTCGTTTCGGCAGAGATATGGAGTTGGAGCATTTTATGAGCGGGACAAGGCGCAGAGGTACAGCAGGG  
 GGTCCCGTGTGAATGGCCTGCCAGCCACACACAGCGCCACTGCAGCTTCTACCGCACCCGCACCCCT  
 GCAGACTCAGCTCCGAGAAGAAAGCCAAGAAGTTCGATTCTACAGAAATGGTGACCGCTACTTCAAA  
 GGAATTGTGATGCCATCTCCCCAGACCCTTCAGATCTTTCGAGGCCCTGCTGGCTGATTTGACCCGAA  
 CTCTCTCGGATAATGTGAATTTGCCAGGGGTGAGAACCATCTACACCATCGATGGACTCAAGAAGAT  
 CTCCAGCCTGGACCAGCTGGTGAAGGTGAAAGCTATGTCTGCGGCTCCATCGAGCCCTTAAAGAAGCTG  
 GAGTACACCAAGAATGTGAACCCCAACTGGTCAGTGAACGTCAAGACCACCTCAGCCTCCCGCAGTGT  
 CTTCTTTGGCCACTGCCAAGGTGGGCCCTTCGGAGGTTCCGGGAGAATAAGGATTTCAATCGACCCAAGT  
 GGTCAACATCATCAGAAGTGGGGTGAAGCCACGGAAGGCTGTGAGATCTGCTGAACAAGAAGACGGCT  
 CACTCCTTCGAGCAGGTTCTCACTGACATTACCGACGCTATCAAGCTGGACTCCGGTGTGGTGAAGCGCC  
 TGTACACTCTGGATGGGAAGCAGGTGATGTGCCTTCAGGACTTTTTTGGTACGATGACATTTTTATTGC  
 ATGTGGACCAGAGAAGTCCGTTACCAGGATGATTTCTTGTAGATGAAAGTGAATGTGAGTGGTGA  
 TCAACTTCTTACACCAAAATAGCATCAGCGTCCCGCAGAGGCACAACCAAGAGCCAGGACCTTCCCGGA  
 GAAGCAAGTCCCCAGCCTCCACCAGTCAAGTAAATGGAACCCCTGGTAGTCAGCTCTCTACTCCAGCTC  
 GGGCAAGTACCAAGTCCATCACCCAGCCAGGAAGCCTGCGGAAGCAGAGGATCTCTCAGCATGGC  
 GGCTCCTCGACTTCACTTTCATCCACTAAAGTTGTCAGCTCAATGGATGAGAATGATGGCCCTGGGAAG  
 GTGATGAGCTTGGGAGAAGGCACAGCTTCAGAGGGGATGGAGGAGGGAAGAGTCTGAGGAAGCTTCCA  
 GATTCCTGCCACAATAACAGAGAGATACAAAGTCGGGAGAACAATAGGAGACGGAAATTTTGTGTTGTC  
 AAGGAATGTATAGAGAGTGCAGTGTCTCGGGAGTATGCCCTGAAAATCATCAAGAAAAGCAAATGCCGAG  
 GCAAAGAGCACATGATCCAGAACGAGGTCTCCATCCTACGGAGGGTGAAGCACCCCAACATTGCTCCTCT  
 GATTGAAGAGATGGATGTGCCACTGAAGTGTATCTTGAATGGAATTAGTGAAGGGTGGAGACCTTTTC  
 GATGCCATCACCTCCACTAGCAAATACACAGAGAGAGATGCCAGCGGGATGCTGTACAACCTGGCCAGCG  
 CCATCAAATACCTGCACAGCCTGAACATCGTCCACCGTGCATCAAGCCAGAGAATCTGCTGGTGTATGA  
 GCACCAGGATGGCAGTAAGTCACTCAAGTTGGGTGACTTTGGCCTGGCCACAATTGTCGACGGCCCCCTG  
 TACACAGTCTGTGGCACCACAACATATGTGGCTCCAGAAATCATTGCAGAGACTGGATATGGCCTCAAGG  
 TGGACATCTGGCAGCTGGCGTGCATCACTTATATCCTGCTGTGTGGCTTCCCTCCGTTCCGTGGAAGTGG  
 GGATGACCAGGAGGTGCTTTTTGACCAGATCTTGATGGGCCAAGTGGACTTTCCATCTCCGATTGGGAC  
 AATGTGTCAGATTCTGCTAAGGAGCTCATCAACATGATGCTGTTGGTTAACGTGGACCAGAGATTTTCAG  
 CCGTGCAGGTCCTTGGCATCCCTGGGTTAATGATGATGGTCTCCAGAAAATGAGCATCAGCTGTCAAGT  
 AGCTGGCAAAATCAAGAAGCATTCAACACAGGCCCAAGCCGAGCAGCACTGCAGCAGGAGTTTCTGTA  
 ATAGCAACCACCGCTCTTGATAAGGAGAGGCAGGTTTTCCGACGAAGACGCAACCAGGATGTGAGGAGCC  
 GGTACAAGGCGCAGCCAGCTCCACCGAATTGAACTCGGAATCGGAGGACTACTCCCCAGCTCCTCTGA  
 GACTGTTGCTCCCCAATTCGCCCTTT**TAA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** Sgfl-Mlul  
**ACCN:** NM\_019978  
**Insert Size:** 2271 bp

<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_019978.3</a> , <a href="#">NP_064362.1</a>
<b>RefSeq Size:</b>	7865 bp
<b>RefSeq ORF:</b>	2271 bp
<b>Locus ID:</b>	13175
<b>UniProt ID:</b>	<a href="#">Q9JLM8</a>
<b>Cytogenetics:</b>	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]

Transcript Variant: This variant (1, also known as DCLK-long-C, DCK-alpha2-R) is produced from the 5' promoter. It has an additional in-frame segment in the CDS, as compared to variant 5. The resulting isoform (1) is the longest isoform which includes an Arg-rich domain, in addition to two doublecortin domains, a serine/proline-rich domain and a protein kinase domain, as compared to isoform 5. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.