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# Product datasheet for RC217050

## DCAMKL1 (DCLK1) (NM_004734) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | DCAMKL1 (DCLK1) (NM_004734) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | DCAMKL1 |
| **Synonyms:** | CL1; CLICK1; DCAMKL1; DCDC3A; DCLK |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

>RC217050 representing NM_004734
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCCTTCGGCAGAGACATGGAGCTGGAGCACTTCGACGAGCGGGATAAGGCGCAGAGATACAGCCGAG
GGTCGCGGGTGAACGGCCTGCCGAGCCCGACGCACAGCGCCCACTGCAGCTTCTACCGCACCCGCACGCT
GCAGACGCTCAGCTCCGAGAAGAAGGCCAAGAAAGTTCGTTTCTATCGAAACGGAGATCGATACTTCAAA
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CTCTGTCGGATAACGTGAATTTGCCCCAGGGAGTGAGAACAATCTACACCATTGATGGGCTCAAGAAGAT
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GGTCACCATCATCAGAAGTGGCGTGAAGCCACGGAAAGCTGTCAGGATTCTGCTGAACAAGAAAACGGCT
CATTCCTTTGAGCAGGTCCTCACCGATATCACCGATGCCATCAAGCTGGACTCGGGAGTGGTGAAACGCC
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GTAGCAAGTCCCCTGCCTCCACCAGCTCAGTTAATGGAACCCCTGGTAGTCAGCTCTCTACTCCGCGCTC
AGGCAAGTCGCCAAGCCCATCACCCACCAGCCCAGGAAGCCTGCGGAAGCAGAGGAGCTCTCAGCATGGC
GGCTCCTCTACGTCACTTGCGTCCACCAAAGTCTGCAGCTCGATGGATGAGAACGATGGCCCTGGAGAAG
AAGTGTCGGAGGAAGGCTTCCAGATTCCAGCTACAATAACAGAACGATATAAAGTCGGAAGAACAATAGG
AGATGGAAATTTTGCTGTTGTCAAGGAATGTGTAGAAAGATCGACTGCTAGAGAGTATGCTCTGAAAATT
ATCAAGAAAAGCAAATGTCGAGGCAAAGAGCACATGATCCAGAATGAAGTGTCTATTTTAAGAAGAGTGA
AGCATCCCAATATCGTTCTTCTGATTGAGGAGATGGATGTGCCAACTGAACTGTATCTTGTCATGGAATT
AGTAAAGGGGGGAGACCTTTTTGATGCCATTACTTCCACTAACAAATACACCGAGAGAGACGCCAGTGGG
ATGCTGTACAACCTAGCCAGCGCCATCAAATACCTGCATAGCCTGAACATCGTCCACCGTGATATCAAGC
CAGAGAACCTGCTGGTGTATGAGCACCAAGATGGCAGCAAATCACTGAAGCTGGGTGACTTTGGACTGGC
CACCATTGTAGACGGCCCCCTGTACACAGTCTGTGGCACCCCAACATACGTGGCTCCAGAAATCATTGCA
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CTTTCCTTCTCCATACTGGGATAATGTTTCCGATTCTGCAAAGGAGCTCATTACCATGATGCTGTTGGTC
GATGTAGATCAGCGATTTTCTGCTGTTCAAGTACTTGAGCATCCCTGGGTTAATGATGATGGCCTCCCAG
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CACAGCAGCTGGAGTTTCTGTCATAGCACTGGACCACGGGTTTACCATCAAGAGATCAGGGTCTTTGGAC
TACTACCAGCAACCAGGAATGTATTGGATAAGACCACCGCTCTTGATAAGGAGAGGCAGGTTTTCCGACG
AAGACGCAACCAGGATG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC217050 representing NM_004734
Red=Cloning site Green=Tags(s)

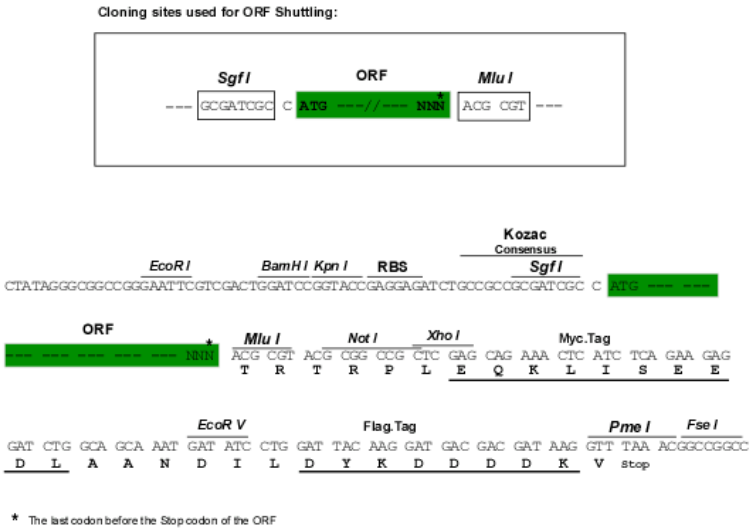
MSFGRDMELEHFDERDKAQRYSRGSRVNGLPSPTHSAHCSFYRTRTLQTLSSEKKAKKVRFYRNGDRYFK
GIVYAISPDRFRSFEALLADLTRTLSDNVNLPQGVRTIYTIDGLKKISSLDQLVEGESYVCGSIEPFKKL
EYTKNVNPNWSVNVKTTSASRAVSSLATAKGSPSEVRENKDFIRPKLVTIIRSGVKPRKAVRILLNKKTA
HSFEQVLTDITDAIKLDSGVVKRLYTLDGKQVMCLQDFFGDDDIFIACGPEKFRYQDDFLLDESECRVVK
STSYTKIASSSRRSTTKSPGPSRRSKSPASTSSVNGTPGSQLSTPRSGKSPSPSPTSPGSLRKQRSSQHG
GSSTSLASTKVCSSMDENDGPGEEVSEEGFQIPATITERYKVGRTIGDGNFAVVKECVERSTAREYALKI
IKKSKCRGKEHMIQNEVSILRRVKHPNIVLLIEEMDVPTELYLVMELVKGGDLFDAITSTNKYTERDASG
MLYNLASAIKYLHSLNIVHRDIKPENLLVYEHQDGSKSLKLGDFGLATIVDGPLYTVCGTPTYVAPEIIA
ETGYGLKVDIWAAGVITYILLCGFPPFRGSGDDQEVLFDQILMGQVDFPSPYWDNVSDSAKELITMMLLV
DVDQRFSAVQVLEHPWVNDDGLPENEHQLSVAGKIKKHFNTGPKPNSTAAGVSVIALDHGFTIKRSGSLD
YYQQPGMYWIRPPLLIRRGRFSDEDATRM

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mg3411_b01.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**ACCN:** NM_004734

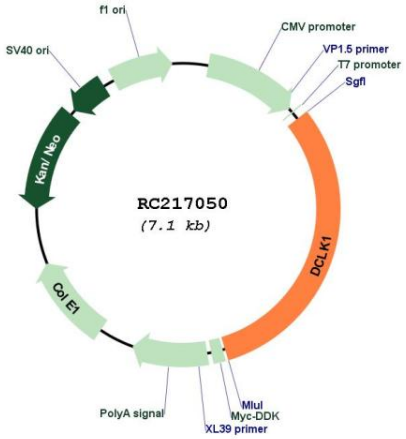
**ORF Size:** 2187 bp

**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

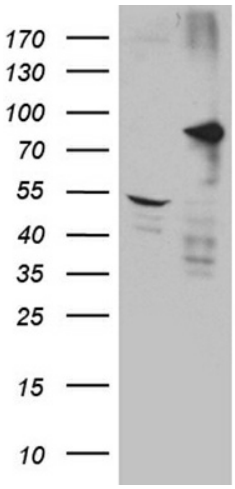
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

| | |
|---|---|
| **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. |
| **Note:** | Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required. |
| **RefSeq:** | NM_004734.5 |
| **RefSeq Size:** | 5703 bp |
| **RefSeq ORF:** | 2190 bp |
| **Locus ID:** | 9201 |
| **UniProt ID:** | O15075 |
| **Cytogenetics:** | 13q13.3 |
| **Domains:** | pkinase, TyrKc, S_TKc, DCX |
| **Protein Families:** | Druggable Genome, Protein Kinase |
| **MW:** | 80.9 kDa |
| **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 Ca2+/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 reported, but the full-length nature and biological validity of some variants have not been defined. These variants encode different isoforms, which are differentially expressed and have different kinase activities.[provided by RefSeq, Sep 2010] |

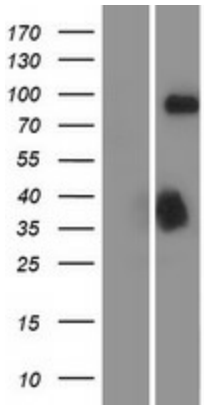
## Product images:



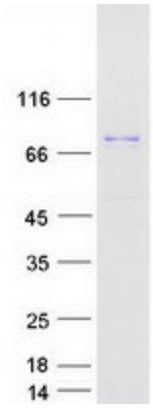

Circular map for RC217050




HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY DCLK1 (Cat# RC217050, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-DCLK1 (1:2000) (Cat# [TA806542]). Positive lysates [LY417785] (100ug) and [LC417785] (20ug) can be purchased separately from OriGene.




Western blot validation of overexpression lysate (Cat# [LY417785]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC217050 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).




Coomassie blue staining of purified DCLK1 protein (Cat# [TP317050]). The protein was produced from HEK293T cells transfected with DCLK1 cDNA clone (Cat# RC217050) using MegaTran 2.0 (Cat# [TT210002]).