

Product datasheet for **KN304323**

Dclk1 Mouse Gene Knockout Kit (CRISPR)

Product data:

Product Type: Knockout Kits (CRISPR)
Format: 2 gRNA vectors, 1 GFP-puro donor, 1 scramble control
Donor DNA: GFP-puro
Symbol: Dclk1
Locus ID: 13175
Components: **KN304323G1**, Dclk1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GACAGGAGACACATACATTC
KN304323G2, Dclk1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: TAGAGCTCATAGAAGGTAAG
KN304323D, donor DNA containing left and right homologous arms and GFP-puro functional cassette.

Homologous arm and GFP-puro sequences:

pUC vector backbone in gray; **Left arm sequence in blue**; **GFP-puro in green**; **Right arm in violet**

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AGAAGTAAGT TGGCCGAGT GTTATCACTC ATGGTTATGG CAGCACTGCA TAATTCTCTT ACTGTCATGC
CATCCGTAAG ATGCTTTTCT GTGACTGGTG AGTACTCAAC CAAGTCATTC TGAGAATAGT GTATGCCGGC
ACCGAGTTGC TCTTGCCCGG CGTCAATACG GGATAATACC GCGCCACATA GCAGAATTTT AAAAGTGCTC
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 CTATTAATTG TTGCCGGGAA GCTAGAGTAA GTAGTTGCCC AGTTAATAGT TTGCGCAACG TTGTTGCCAT
 TGCTACAGGC ATCGTGGTGT CACGCTCGTC GTTTGTTATG GCTTCATTCA GCTCCGGTTC CCAACGATC

GE100003, scramble sequence in pCas-Guide vector

Disclaimer:

These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

RefSeq:

[NM_001111051](#), [NM_001111052](#), [NM_001111053](#), [NM_001195538](#), [NM_001195539](#), [NM_001195540](#), [NM_019978](#)

UniProt ID:

[Q9JLM8](#)

Synonyms:

1700113D08Rik; 2810480F11Rik; AI836758; Click-I; Cpg16; Dcamkl1; Dcl; Dcl1; mKIAA0369

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 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]

Product images:

