

## Product datasheet for **KN217050**

### DCAMKL1 (DCLK1) Human 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:	DCAMKL1
Locus ID:	9201
Components:	<p><b>KN217050G1</b>, DCAMKL1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: AGGCGCAGAGATACAGCCGA</p> <p><b>KN217050G2</b>, DCAMKL1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GCTGGAGCACTTCGACGAGC</p> <p><b>KN217050D</b>, donor DNA containing left and right homologous arms and GFP-puro functional cassette.</p>

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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 AGGCATCGTG GTGTCACGCT CGTCGTTTGG TATGGCTTCA TTCAGCTCCG GTTCCCAACG ATC

**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\\_001195415](#), [NM\\_001195416](#), [NM\\_001195430](#), [NM\\_004734](#), [NM\\_001330071](#),  
[NM\\_001330072](#)

**UniProt ID:**

[O15075](#)

**Synonyms:**

CL1; CLICK1; DCAMKL1; DCDC3A; DCLK

**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 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:**
