

Product datasheet for KN217050RB

OriGene Technologies, Inc.

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DCAMKL1 (DCLK1) Human Gene Knockout Kit (CRISPR)

Product data:

Product Type: Knockout Kits (CRISPR)

Format: 2 gRNA vectors, 1 RFP-BSD donor, 1 scramble control

Donor DNA: RFP-BSD **Symbol:** DCAMKL1

Locus ID: 9201

Components: KN217050G1, DCAMKL1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)

KN217050G2, DCAMKL1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002) **KN217050RBD**, donor DNA containing left and right homologous arms and RFP-BSD

functional cassette.

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: <u>NM 001195415, NM 001195416, NM 001195430, NM 004734, NM 001330071,</u>

NM 001330072

UniProt ID: O15075

Synonyms: CL1; CLICK1; DCAMKL1; DCDC3A; DCLK

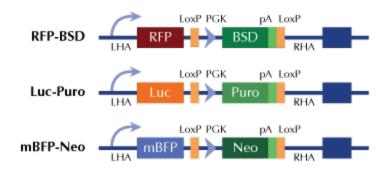


Summary:

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 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 upregulated 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:

Donor Vector Edited Chromosome



RFP, Luc, and mBFP will be under native gene promoter