

## Recombinant Human DCLK2

**Cat. No.** DCLK2-26989TH    **Lot. No.** (See product label)

### SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <b>Product Overview</b>    | Recombinant fragment, corresponding to amino acids 1-690 of Human DCAMKL2 with N-terminal proprietary tag expressed in a Baculovirus infected Sf9 cell expression system, MWt 105kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>ProteinLength</b>       | 1-690 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Description</b>         | <p>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. Mouse studies show that the DCX gene, another family member, and this gene share function in the establishment of hippocampal organization and that their absence results in a severe epileptic phenotype and lethality, as described in human patients with lissencephaly. Multiple alternatively spliced transcript variants have been identified.</p> |
| <b>Biological activity</b> | The Specific activity of DCLK2-26989TH was determined to be 94 nmol/min/mg.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Form</b>                | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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| <b>Storage buffer</b>      | Preservative: None<br>Constituents: 25% Glycerol, 50mM Tris HCl, 150mM Sodium chloride, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, pH 7.5        |
| <b>Storage</b>             | Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.                                                             |
| <b>GENE INFORMATION</b>    |                                                                                                                                                       |
| <b>Gene Name</b>           | DCLK2 doublecortin-like kinase 2 [ Homo sapiens ]                                                                                                     |
| <b>Official Symbol</b>     | DCLK2                                                                                                                                                 |
| <b>Synonyms</b>            | DCLK2; doublecortin-like kinase 2; DCAMKL2, doublecortin and CaM kinase like 2; serine/threonine-protein kinase DCLK2; DCDC3; DCDC3B; DCK2; MGC45428; |
| <b>Gene ID</b>             | 166614                                                                                                                                                |
| <b>mRNA Refseq</b>         | NM_001040260                                                                                                                                          |
| <b>Protein Refseq</b>      | NP_001035350                                                                                                                                          |
| <b>MIM</b>                 | 613166                                                                                                                                                |
| <b>Uniprot ID</b>          | Q8N568                                                                                                                                                |
| <b>Chromosome Location</b> | 4q31.3                                                                                                                                                |
| <b>Function</b>            | ATP binding; nucleotide binding; protein serine/threonine kinase activity;                                                                            |