

#### DESCRIPTION

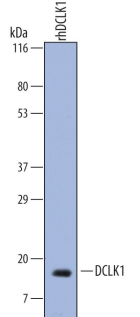
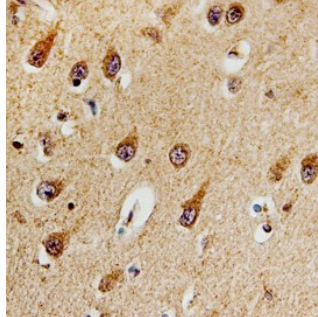
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human DCLK1 in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human DCLK1 Isoform 1 Lys621-Met729 Accession # NP_004725
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below

#### DATA

<p><b>Western Blot</b></p>  <p><b>Detection of Human DCLK1 by Western Blot.</b> Western blot shows recombinant human (rh) DCLK1. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human DCLK1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7138) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for rhDCLK1 Isoform 1 (amino acids 621-729) at approximately 18 kDa (as indicated). This experiment was conducted under reducing conditions and using <a href="#">Immunoblot Buffer Group 8</a>.</p>	<p><b>Immunohistochemistry</b></p>  <p><b>DCLK1 in Human Brain.</b> DCLK1 was detected in formalin fixed paraffin-embedded sections of human brain (hippocampus) using Sheep Anti-Human DCLK1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7138) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to neurons. View our protocol for <a href="#">Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</a>.</p>
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#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### BACKGROUND

DCLK1 (Doublecortin-like and CAM Kinase-like 1; also DCAMKL1) is an 80-88 kDa member of the CaMK subfamily, Ser/Thr protein kinase family of molecules. It is found in both fetal and adult tissues, and individual cells expressing DCLK1 include pancreatic stem cells, intestinal Tuft cells, migrating neurons and select tumor types. DCLK1 is anchored to microtubules, and appears to induce tubulin polymerization. It also possesses a microtubule-independent Ser/Thr kinase phosphorylation activity. Human DCLK1 is 740 amino acids (aa) in length. It contains two doublecortin domains (aa 57-143 and 186-269) plus a protein kinase domain (aa 390-647). There are at least five utilized Ser/Thr phosphorylation sites. Multiple splice variants exist. One is termed DCL, and is a 42 kDa isoform that possesses an 18 aa substitution for aa 346-740. A second is called CPG-16 and represents a 50 kDa isoform that contains a six aa substitution for aa 1-313. A third isoform is called CARP, and is a combination of the C- and N-terminal substitutions described above. A fourth isoform resembles CPG-16 with a 43 aa substitution for aa 687-740, while a fifth isoform is simply DCLK1 with the same 43 aa substitution. DCLK1 undergoes proteolysis to generate a 35 kDa N-terminus and a 50 kDa C-terminus. Over aa 61-729, human DCLK1 shares 98% aa identity with mouse DCLK1.