

## Ceramide kinase (CERK) (NT). Rabbit Antigen Immunoaffinity Purified Polyclonal Human

CERK, DA59H18.2, DA59H18.3, DKFZP434E0211, EC 2.7.1.138, FLJ21430, FLJ23239, HCERK, KIAA1646, LK4, MGC131878

### BACKGROUND

Sphingolipids, in addition to being structural components of membranes, regulate cell-cell and cell-substrate interactions, proliferation, and differentiation. Members of this diverse group of lipids have emerged as a novel class of signaling molecules that also regulate phagocytosis. The mechanisms by which sphingolipids exert these effects remain incompletely defined. More than a decade ago, it was found that ceramide can be phosphorylated to ceramide 1-phosphate (C1P). Ceramide kinase (CERK) and its phosphorylated product ceramide 1-phosphate (C1P) are central players in inflammation and cancer. The product of CERK activity, ceramide 1-phosphate (C1P), has been reported to have mitogenic effects. C1P is a direct activator of cytosolic phospholipase A2 and is involved in arachidonic acid release. CERK is a mediator of Ca<sup>2+</sup>-dependent degranulation in mast cells. In both arachidonic acid release and mast cell degranulation, the intracellular elevation of Ca<sup>2+</sup> is a central event that acts as a regulatory mechanism of CERK activity. C1P is found in brain synaptic vesicles, and plays a role in regulating the secretion of neurotransmitters. CERK activity exists in HL-60 cells where the C1P is derived from ceramide released from sphingomyelin. The expressed kinase has specific ceramide phosphorylating activity. CERKs exist in a variety of cellular organisms, including plants, nematodes, insects, and vertebrates.

### ORDERING INFORMATION

**CATALOG NUMBER**  
X2161P

**SIZE**  
10 Miniblots

**FORM**  
Affinity Purified

**HOST/CLONE**  
Rabbit

**FORMULATION**  
Phosphate buffered saline containing 0.1% sodium azide

**CONCENTRATION**  
1 mg/ml

**ISOTYPE**  
IgG

**APPLICATIONS**  
Immunohistochemistry

### IMMUNOGEN

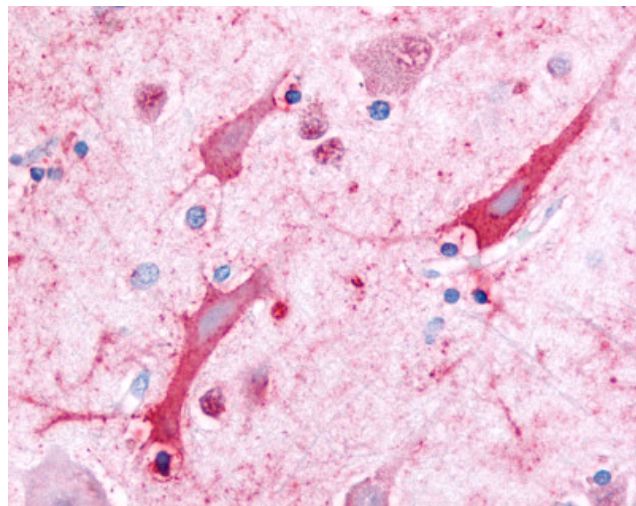
Synthetic peptide derived from the N-terminal extracellular domain of human CERK

### SPECIES REACTIVITY

Human

### Legend:

CERK staining of formallin fixed paraffin embedded human brain (cortex) tissue at a dilution of 20 µg/ml. Antigen retrieval using a citrate buffer and steam/heat was utilized.



**For research use only. Not for use in human diagnostics or therapeutics.**

**POSITIVE CONTROL/TISSUE EXPRESSION****COMMENTS**

Antibody can be used for immunohistochemistry (20 µg/ml). Optimal concentration should be evaluated by serial dilutions.

**SHIP CONDITIONS**

Ship on gel ice, store at -70°C immediately upon arrival

**STORAGE CUSTOMER**

Product should be stored at -70°C. Aliquot to avoid freeze/thaw cycles

**STABILITY**

Products are stable for one year from purchase when stored properly

**REFERENCES**

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