



Ceramide Kinase. Rabbit Polyclonal Antibody

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 Ca²⁺-dependent degranulation in mast cells. In both arachidonic acid release and mast cell degranulation, the intracellular elevation of Ca²⁺ 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.

IMMUNOGEN

Synthetic peptide derived from human ceramide kinase protein

POSITIVE CONTROL/TISSUE EXPRESSION

High level expression in heart, brain, skeletal muscle, kidney and liver

COMMENTS

Antibody can be used for Western blotting (1-10µg/ml). Can also be used for ELISA. Optimal concentration should be evaluated by serial dilutions.

ORDERING INFORMATION

CATALOG NUMBER

X1715P

SIZE

100 µg

FORM

Unconjugated

HOST/CLONE

Rabbit

FORMULATION

Provided as solution in phosphate buffered saline with 0.08% sodium azide

CONCENTRATION

See vial for concentration

ISOTYPE

N/A

APPLICATIONS

Western Blot, ELISA

SPECIES REACTIVITY

Human

ACCESSION NUMBER

Q8TCT0, Human

PURIFICATION

Ammonium Sulfate Precipitation

SHIP CONDITIONS

Ship at ambient temperature, freeze upon arrival

STORAGE CUSTOMER

Product should be stored at -20°C. Aliquot to avoid freeze/thaw cycles

STABILITY

Products are stable for one year from purchase when stored properly

REFERENCES

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6. Wijesinghe DS, Massiello A, Subramanian P, Szulc Z, Bielawska A, Chalfant CE. 'Substrate specificity of human ceramide kinase.' *J Lipid Res.* 2005 Dec;46(12):2706-16. Epub 2005 Sep 18.
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