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CERK Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7088b

Product Information

Application	WB, E
Primary Accession	Q8TCT0
Other Accession	NP_073603
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	59977
Antigen Region	487-516

Additional Information

Gene ID	64781
Other Names	Ceramide kinase, hCERK, Acylsphingosine kinase, Lipid kinase 4, LK4, CERK, KIAA1646
Target/Specificity	This CERK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 487-516 amino acids from the C-terminal region of human CERK.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CERK Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CERK (HGNC:19256)
Synonyms	KIAA1646
Function	Catalyzes specifically the phosphorylation of ceramide to form ceramide

	1-phosphate (PubMed:11956206, PubMed:16269826, PubMed:19168031). Acts efficiently on natural and analog ceramides (C6, C8, C16 ceramides, and C8-dihydroceramide), to a lesser extent on C2- ceramide and C6-dihydroceramide, but not on other lipids, such as various sphingosines (PubMed:11956206, PubMed:16269826, PubMed:17392267, PubMed:19168031). Shows a greater preference for D- erythro isomer of ceramides (PubMed:16269826). Binds phosphoinositides (PubMed:19168031).
Cellular Location	Cell membrane; Peripheral membrane protein; Cytoplasmic side. Golgi apparatus, trans-Golgi network
Tissue Location	High level expression in heart, brain, skeletal muscle, kidney and liver; moderate in peripheral blood leukocytes and thymus; very low in spleen, small intestine, placenta and lung

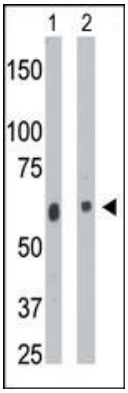
Background

Ceramide kinases convert the sphingolipid metabolite ceramide into ceramide-1-phosphate, both key mediators of cellular apoptosis and survival. Ceramide metabolism plays an essential role in the viability of neuronal cells, the membranes of which are particularly rich in sphingolipids. CERK catalyzes specifically the phosphorylation of ceramide to form ceramide 1-phosphate. This enzyme acts efficiently on natural and analog ceramides (C6, C8, C16 ceramides, and C8 dihydroceramide), and to a lesser extent on C2-ceramide and C6-dihydroceramide, but not on other lipids, such as various sphingosines. High level expression is noted in heart, brain, skeletal muscle, kidney and liver; moderate expression in peripheral blood leukocytes and thymus; and low expression in spleen, small intestine, placenta and lung.

References

J. Biol. Chem. 279 (17), 17570-17577 (2004)
J. Biol. Chem. 278 (40), 38206-38213 (2003)
J. Biol. Chem. 277 (26), 23294-23300 (2002)

Images



The anti-CERK Pab (Cat. #AP7088b) is used in Western blot to detect CERK in mouse heart tissue lysate (Lane 1) and A2058 cell lysate (Lane 2).

Citations

- ATRA inhibits ceramide kinase transcription in a human neuroblastoma cell line, SH-SY5Y cells: the role of COUP-TFI.
- Ceramide kinase promotes Ca2+ signaling near IgG-opsonized targets and enhances phagolysosomal fusion in COS-1 cells.
- Regulation of adipogenesis by ceramide 1-phosphate.
- Implication of Ceramide Kinase in Adipogenesis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.