

Ceramide Kinase. Rabbit Polyclonal Antibody Human

Acylsphingosine kinase, hCERK, Lipid kinase 4, LK4

BACKGROUND

Sphingolipids and their metabolic products, including ceramide, sphingosine, and sphingosine-1-phosphate (S1P), are important signaling molecules in many biological processes. Ceramide has been is one of the key elements regulating apoptotic responses. Ceramide has been reported as a regulator of several protein kinases and phosphatases, including ceramide-activated protein kinase, protein phosphatase, and protein kinase C. Sphingosine, a metabolite of ceramide, might also play a role in mitochondria-mediated apoptosis. Sphingosine inhibits several protein kinases, including protein kinase C and Ca²⁺-calmodulin-dependent kinase II. S1P regulates many biological processes, including mitogenesis, differentiation, migration, and suppression of apoptosis.

ORDERING INFORMATION

CATALOG NUMBER
X1705P

SIZE
100 µg

FORM
Unconjugated

HOST/CLONE
Rabbit

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

CONCENTRATION
1 mg/ml

ISOTYPE
N/A

APPLICATIONS
ELISA, Western Blot

IMMUNOGEN

Recombinant full-length ceramide kinase protein

SPECIES REACTIVITY

Human

COMMENTS

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

STORAGE

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

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

POSITIVE CONTROL/TISSUE EXPRESSION

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

SHIP CONDITIONS

Ship at ambient temperature, freeze upon arrival

REFERENCES

1. Lamour NF, Chalfant CE. 'Ceramide-1-phosphate: The "missing" link in eicosanoid biosynthesis and inflammation.' *Mol Interv.* 2005 Dec;5(6):358–67.
2. Kim JW, Inagaki Y, Mitsutake S, Maezawa N, Katsumura S, Ryu YW, Park CS, Taniguchi M, Igarashi Y. 'Suppression of mast cell degranulation by a novel ceramide kinase inhibitor, the F-12509A olefin isomer K1.' *Biochim Biophys Acta.* 2005 Dec 30;1738(1–3):82–90. Epub 2005 Nov 14.
3. Van Overloop H, Gijssbers S, Van Veldhoven PP. 'Further characterization of mammalian ceramide kinase: substrate delivery and (stereo)specificity, tissue distribution, and subcellular localization studies.' *J Lipid Res.* 2006 Feb;47(2):268–83. Epub 2005 Nov 3.
4. Chalfant CE, Spiegel S. 'Sphingosine 1-phosphate and ceramide 1-phosphate: expanding roles in cell signaling.' *J Cell Sci.* 2005 Oct 15;118(Pt 20):4605–12. Review.
5. Mitsutake S, Igarashi Y. 'Calmodulin is involved in the Ca²⁺-dependent activation of ceramide kinase as a calcium sensor.' *J Biol Chem.* 2005 Dec 9;280(49):40436–41. Epub 2005 Oct 3.
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.
7. Kim TJ, Mitsutake S, Kato M, Igarashi Y. 'The leucine 10 residue in the pleckstrin homology domain of ceramide kinase is crucial for its catalytic activity.' *FEBS Lett.* 2005 Aug 15;579(20):4383–8.

LAST MODIFIED 2/28/2006

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