Recombinant Mouse Sphingosine Kinase 1, His-tagged

Cat. No. Sphk1-524M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Sphingosine kinase 1 (full length) was expressed in a Baculovirus infected Sf9 cell expression system with N-terminal His tag. MW=47.10 kDa.
Species	Mouse
Source	Sf9 Cells
Description	Sphingosine kinase 1 is an enzyme that in humans is encoded by the SPHK1 gene. Sphingosine-1-phosphate (SPP) is a novel lipid messenger with both intracellular and extracellular functions. Intracellularly, it regulates proliferation and survival, and extracellularly, it is a ligand for EDG1. Various stimuli increase cellular levels of SPP by activation of sphingosine kinase (SPHK), the enzyme that catalyzes the phosphorylation of sphingosine. Competitive inhibitors of SPHK block formation of SPP and selectively inhibit cellular proliferation induced by a variety of factors, including platelet-derived growth factor and serum.
Formulated In	25 mM Tris-HCl, pH 8.0, 100 mM NaCl, 0.05% Tween-20, 50% glycerol, and 3 mM DTT.
Application	useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.
Specific Activity	20 U/ug. Sphingosine kinase activity was determined using D-erythrosphingosine and ATP as substrates. A unit of sphingosine kinase activity is defined as the amount of enzyme required to produce 1 pmol of S1P/min. Assay buffer: 50 mM HEPES, pH

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	7.4, 150 mM NaCl, 5 mM MgCl2, 1 mM DTT, 3 uM Na-orthovanadate, 0.5 mM ATP, 4 uM D-erythrosphingosine, and 0.1-0.5 ug/ml sphingosine kinase 1.
Purity	>50% by SDS-PAGE.
Stability	> 6 months at –80°C.
Pathways	Calcium signaling pathway; Fc gamma R-mediated phagocytosis; Metabolic pathways; Sphingolipid metabolism; VEGF signaling pathway
Full Length	Full L.

GENE INFORMATION

Gene Name	Sphk1 sphingosine kinase 1 [Mus musculus]
Synonyms	sphingosine kinase 1; SK1; Sphk1; 1110006G24Rik; OTTMUSP00000004201; OTTMUSP00000004202; OTTMUSP00000004203; OTTMUSP00000004204; OTTMUSP00000004205
Gene ID	20698
mRNA Refseq	NM_011451
Protein Refseq	NP_035581
UniProt ID	Q8CI15
Chromosome Location	11 E2
Function	ATP binding; DNA binding; calmodulin binding; diacylglycerol kinase activity; kinase

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	activity; nucleotide binding; sphinganine kinase activity; transferase activity

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