

Sphingosine Kinase 1/SPHK1 Protein, Human, Recombinant

General Information

Synonyms:	SPHK;SPHK1; sphingosine kinase 1;SPK
Protein Construction:	A DNA sequence encoding the human SPHK1 (Q9NYA1-1)(Met1-Leu384) was fused with two additional amino acids (Gly & Pro) at the N-terminus. Predicted N terminal: Gly
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q9NYA1-1
Molecular Weight:	42.7 kDa (predicted); 46 kDa (reducing conditions)

QC Testing

Biological Activity:	The specific activity was determined to be > 500nmol/min/mg using Sphingosine Kinase Substrate as substrate.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 20 mM Tris, 500 mM NaCl, 10% glycerol, pH 8.0.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

SPHK1, also known as sphingosine Kinase 1, catalyzes the phosphorylation of sphingosine to form sphingosine-1-phosphate (S1P). S1P exhibits a broad spectrum of biological activities including cell proliferation, survival, migration, cytoskeletal organization, and morphogenesis. It is a ligand for cell surface G protein-coupled receptors. SPHK 1 is a potential therapeutic target for the control of cancer and inflammation. SPHK1 plays a key role in TNF-alpha signaling and the NF-kappa-B activation pathway important in inflammatory, antiapoptotic, and immune processes.

Reference

Kohama T. et al., 1998, J Biol Chem. 273 (37): 23722-8.

Xia P. et al., 2002, J Biol Chem. 277 (10): 7996-8003.

Tsukahara T. et al., 2002, Tanpakushitsu Kakusan Koso. 47 (4): 509-13.

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