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Technical Data Sheet

For research use only

Not intended or approved for
diagnostic or therapeutic use.

Sphingosine kinase 1, active

(Recombinant full-length human protein expressed in Sf9 cells)

Catalog # **E-K068**
Size: 10 µg
Specific activity: 20 U/mg

Product Description

Sphingosine kinase 1 (sphingosine kinase type 1 isoform, SphK1) is a lipid kinase. Recombinant full-length human Sphingosine kinase 1 with N-terminal 6xHis tag was expressed in a baculovirus infected Sf9 insect cell expression system. The GenBank Accession number is AF200328. MW = 46.9 kDa.

Specific Activity

20 U/mg. One unit of Sphingosine kinase activity is defined as 1 nmol phosphate incorporated into D-erythro-sphingosine substrate to produce S1P per minute at pH 7.4 and 30 °C.

Assay Condition

50 mM HEPES, pH 7.4, 150 mM NaCl, 5 mM MgCl₂, 1 mM DTT, 3 µM Na-orthovanadate, 0.1 mM ATP, 4 µM D-erythro-sphingosine substrate, and 0.5 µg/ml recombinant Sphingosine kinase 1.

Purity

> 80% by SDS-PAGE.

Formulation

Recombinant protein is in storage buffer (25 mM Tris-HCl, pH 8.0, 100 mM NaCl, 0.05% Tween-20, 3 mM DTT, and 50% glycerol).

Storage and Stability

Store product frozen at or below -70 °C. Enzyme will be stable for at least 6 months at -70 °C as undiluted stock. Freeze in working aliquots to avoid repeated thawing and freezing.

Application

Sphingosine kinase 1 is useful for the study of enzyme kinetics, inhibitor screening, and selectivity profiling.

References

1. Delon C. *et al.* (2004) *J. Biol. Chem.* **279** (43), 44763-44774
2. Taha TA. *et al.* (2005) *FASEB J. Mar*, **20** (3), 482-4
3. Pchejetski D. *et al.* (2005) *Cancer Res*, **65** (24), 11667-75

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