

Product Information

**SPHK1, active, GST-tagged, human
PRECISIO® Kinase
recombinant, expressed in *Sf9* cells**

Catalog Number **SRP5281**
Storage Temperature -70°C

Synonym: SPHK

Product Description

SPHK1 catalyzes the phosphorylation of sphingosine to form sphingosine-1-phosphate (SPP), which is a novel lipid messenger with both intracellular and extracellular functions. Various stimuli increase cellular levels of SPP by activation of SPHK1.¹ Competitive inhibitors of SPHK1 block formation of SPP and selectively inhibit cellular proliferation induced by a variety of factors. The SPHK1/sphingosine-1-phosphate pathway contributes to colon carcinogenesis. SPHK1 plays a key role in the generation and release of proinflammatory mediators triggered by anaphylatoxins from human macrophages and also is involved in the process of immune cell motility.²

Recombinant full-length human SPHK1 was expressed by baculovirus in *Sf9* insect cells using an N-terminal GST-tag. The gene accession number is BC008040. It is supplied in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, and 25% glycerol.

Molecular mass: ~71 kDa

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and storage at -70°C is recommended. After opening, aliquot into smaller quantities and store at -70°C . Avoid repeated handling and multiple freeze/thaw cycles.

Figure 1.
SDS-PAGE Gel of Typical Lot:
 $\geq 70\%$ (SDS-PAGE, densitometry)

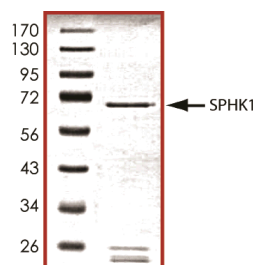
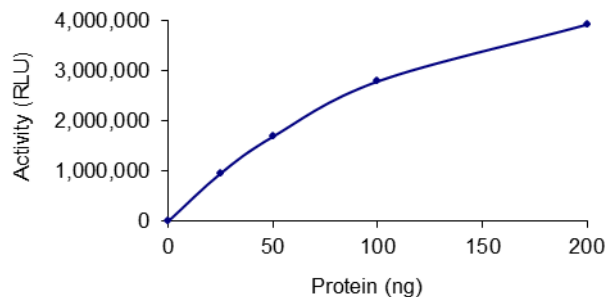


Figure 2.
Specific Activity of Typical Lot:
465–592 nmole/min/mg



Kinase activity was determined with a luminescent assay procedure.

References

1. Xia, P. et al., Sphingosine kinase interacts with TRAF2 and dissects tumor necrosis factor- α signaling. *J. Biol. Chem.*, **277**, 7996-8003 (2002).
2. Pappu, R. et al., Promotion of lymphocyte egress into blood and lymph by distinct sources of sphingosine-1-phosphate. *Science*, **316**, 295-298 (2007).

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