

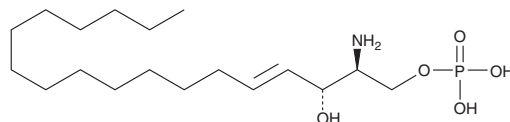
Product Information



Sphingosine-1-Phosphate

Item No. 62570

CAS Registry No.: 26993-30-6
Formal Name: 2S-amino-1-(dihydrogen phosphate)-4E-octadecene-1,3R-diol
Synonyms: S1P, Sphingosine-1-Phosphoric Acid
MF: C₁₈H₃₈NO₅P
FW: 379.5
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that sphingosine-1-phosphate (S1P) be stored as supplied at -20°C, preferably in a desiccator. It should be stable for at least one year.

S1P is supplied as crystalline solid. S1P is sparingly soluble in organic solvents. Aqueous solutions can be prepared by directly dissolving the crystalline solid in basic buffers. The solubility of S1P in 0.3 M NaOH is approximately 4 mg/ml, but it will precipitate at pH less than 7.5. The reconstituted material will be stable for 24 hours if stored at 4°C.

S1P is a metabolite of membrane sphingolipids. S1P mobilizes calcium in Swiss 3T3 fibroblasts from internal stores *via* a mechanism independent of inositol lipid hydrolysis and arachidonic acid release.¹ This increase is dose dependent with a half-maximal effect at 2 μM.¹ Unrelated to its ability to mobilize calcium, S1P also induces phosphatidic acid release in 3T3 fibroblasts through activation of phospholipase D.²

References

1. Mattie, M., Brooker, G., and Spiegel, S. Sphingosine-1-phosphate, a putative second messenger, mobilizes calcium from internal stores *via* an inositol trisphosphate-independent pathway. *J. Biol. Chem.* **269**, 3181-3188 (1994).
2. Desai, N.N., Zhang, H., Olivera, A., *et al.* Sphingosine-1-phosphate, a metabolite of sphingosine, increases phosphatidic acid levels by phospholipase D activation. *J. Biol. Chem.* **267**, 23122-23128 (1992).

Related Products

Sphingosine Kinase 1 (human recombinant) - Item No. 10348 • S1P Lyase Fluorogenic Substrate - Item No. 13238 • C-2 Ceramide - Item No. 62510 • C-6 Ceramide - Item No. 62525 • C-6 NBD Ceramide - Item No. 62527 • Nervonic Ceramide - Item No. 62530 • Lignoceric Ceramide - Item No. 62535 • C-8 Ceramide - Item No. 62540 • C-8 Ceramide-1-phosphate - Item No. 62547 • Fumonisin B₁ - Item No. 62580 • Palmitoyl Sphingomyelin - Item No. 10007946 • Lyso-Sphingomyelin - Item No. 10007947

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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