

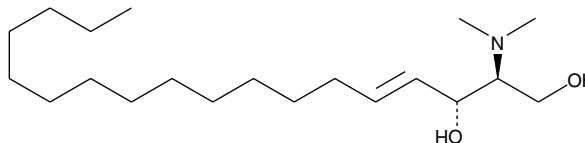
Product Information



N,N-Dimethylsphingosine

Item No. 62575

CAS Registry No: 119567-63-4
Formal Name: 2S-(dimethylamino)-4E-octadecene-1,3R-diol
MF: C₂₀H₄₁NO₂
FW: 327.6
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol



Laboratory Procedures

N,N-Dimethylsphingosine (N,N-DMS) is an inhibitor of sphingosine kinase, thus blocking the conversion of sphingosine to sphingosine-1-phosphate. For long term storage, we suggest that N,N-DMS be stored as supplied at -20°C. It will be stable for at least one year.

N,N-DMS is supplied as a solution in ethanol. To change the solvent, simply evaporate the N,N-DMS under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of N,N-DMS in these solvents is approximately 50 mg/ml. N,N-DMS is stable for at least six months in these solvents if stored at -20°C.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of N,N-DMS is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of N,N-DMS in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

N,N-DMS is an inhibitor of sphingosine kinase. It is a natural metabolite of sphingosine in some cancer cell lines and tissues.¹ N,N-DMS inhibits U937 cell sphingosine kinase with a K_i value of 3.1 μM.² N,N-DMS induces apoptosis, but is not an inhibitor of protein kinase C.

References

1. Yatomi, Y., Ruan, F., Megidish, T., *et al.* N,N-Dimethylsphingosine inhibition of sphingosine kinase and sphingosine 1-phosphate activity in human platelets. *Biochemistry* **35**, 626-633 (1996).
2. Edsall, L.C., Van Brocklyn, J.R., Cuvillier, O., *et al.* N,N-Dimethylsphingosine is a potent competitive inhibitor of sphingosine kinase but not of protein kinase C: Modulation of cellular levels of sphingosine 1-phosphate and ceramide. *Biochemistry* **37**, 12892-12898 (1998).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/62575

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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