

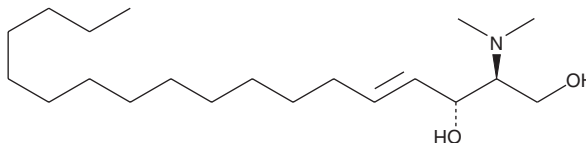
# PRODUCT INFORMATION



## N,N-Dimethylsphingosine (d18:1)

Item No. 62575

**CAS Registry No.:** 119567-63-4  
**Formal Name:** 2S-(dimethylamino)-4E-octadecene-1,3R-diol  
**MF:** C<sub>20</sub>H<sub>41</sub>NO<sub>2</sub>  
**FW:** 327.6  
**Purity:** ≥98%  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:** ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

N,N-Dimethylsphingosine (d18:1) is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol 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-dimethylsphingosine (d18:1) in these solvents is approximately 50 and 65 mg/ml, respectively.

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-dimethylsphingosine (d18:1) is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of N,N-dimethylsphingosine (d18:1) in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

N,N-Dimethylsphingosine is a metabolite of sphingosine and an inhibitor of sphingosine kinase (SPHK) with K<sub>i</sub> values of 3.1, 6.8, and 2.3 μM in U937, PC12, and Swiss 3T3 cell extracts, respectively.<sup>1,2</sup> It is selective for SPHK over PKC in PC12 cells when used at a concentration of 10 μM.<sup>2</sup>

### 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).

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 01/19/2024

### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM