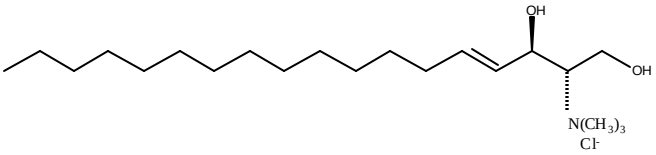
3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone (800) 325-5832 (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

N,N,N-TRIMETHYLSPHINGOSINE CHLORIDE
Product Number **T6067**
Storage Temperature –20 °C



Product Description

Molecular Formula: $C_{21}H_{44}NO_2Cl$
Molecular Weight: 378.03

Supplied as a white to off-white crystalline solid.
Purity: >99% (TLC, single spot).
Melting point: 72-74 °C.

N,N,N-trimethylsphingosine chloride (TMS) is a stable, synthetic, N-methylated derivative of sphingosine.

TMS strongly inhibits growth and metastasis of various tumor cells and is a potent apoptotic agent. It is also a potent antiinflammatory agent that blocks leukocyte activation and trans-endothelial migration of neutrophils.[1,2,3,4,6] TMS is a potent inhibitor of protein kinase C activity,[2,4] It also reduces P-selectin expression in platelets and neutrophils.[4] In human endothelial cells (HUVECs), TMS inhibits IL-1β-induced E-selectin expression by blocking NFκB activation.[5] As a result, endothelial cells and platelets do not aggregate. This explains the anti-metastatic and anti-inflammatory effects of TMS *in* vivo.

By incorporating TMS into the liposomes, it is possible to lower its toxicity as well as increase its half-life in the circulation.

Preparation Instructions

Soluble in water (>10 mg/ml).

Storage/Stability

Store tightly sealed at -20°C.

References

1. Okoshi, H. et al., Cancer Res., **51**, 6019-6024 (1991).
2. Park, Y.S., et al., Cancer Res., **54**, 2213-2217 (1994).
3. Scalia, R. et al., J. Leukoc. Biol., **59**, 317-324 (1996).
4. Kimura, S., et al., Biochem. Pharmacol., **44,** 1585-1595 (1992).
5. Masamune, A. et al., FEBS Lett., **367**, 205 (1995).
6. Park, Y.S., et al., Cancer Res., **54**, 2213-2217 (1994).

AH 7/3/01