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DATASHEET

D-erythro-N,N-Dimethylsphingosine

Product overview

Name	D-erythro-N,N-Dimethylsphingosine
Cat No	HB0237
Alternative names	DMS
Biological action	Inhibitor
Purity	>98%
Description	Sphingosine kinase inhibitor


Biological Data

Biological description	Competitive sphingosine kinase inhibitor ($IC_{50} = 5 \mu M$). Also inhibits protein kinase C (PKC). Shows cardioprotective, apoptotic and anti-cancer actions.
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Solubility & Handling

Solubility overview	Soluble in ethanol (25mg/ml) or DMSO (25mg/ml)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Molecular Weight	327.5
Chemical structure	
Molecular Formula	$C_{20}H_{41}NO_2$
CAS Number	119567-63-4
PubChem identifier	0
SMILES	<chem>CCCCCCCCCCCCC/C=C/[C@@H](O)[C@H](CO)N(C)C</chem>

References

Low dose N, N-dimethylsphingosine is cardioprotective and activates cytosolic sphingosine kinase by a PKCepsilon dependent mechanism.

Jin ZQ *et al* (2006) Cardiovasc Res 71(4)
PubMedID [16831409](#)

Sphingosine and its methylated derivative N,N-dimethylsphingosine (DMS) induce apoptosis in a variety of human cancer cell lines.

Sweeney EA *et al* (1996) Int J Cancer 66(3)
PubMedID [8621258](#)

D-erythro-N,N-dimethylsphingosine inhibits bFGF-induced proliferation of cerebral, aortic and coronary smooth muscle cells.

Xu CB *et al* (2002) *Atherosclerosis* 164(2)

PubMedID [12204793](#)

Effect of chemically well-defined sphingosine and its N-methyl derivatives on protein kinase C and src kinase activities.

Igarashi Y *et al* (1989) *Biochemistry* 28(17)

PubMedID [2479412](#)
