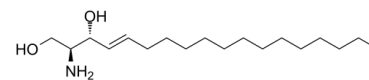


Data Sheet

Product Name:	D-erythro-Sphingosine
Cat. No.:	CS-0020759
CAS No.:	123-78-4
Molecular Formula:	C ₁₈ H ₃₇ NO ₂
Molecular Weight:	299.49
Target:	Endogenous Metabolite; Phosphatase; PKC
Pathway:	Epigenetics; Metabolic Enzyme/Protease; TGF-beta/Smad
Solubility:	DMSO : 41.67 mg/mL (139.14 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

D-erythro-Sphingosine (Erythrosphingosine) is a very potent activator of **p32-kinase** with an **EC₅₀** of 8 μ M, and inhibits **protein kinase C (PKC)**. D-erythro-Sphingosine (Erythrosphingosine) is also a **PP2A** activator^{[1][2][3][4]}. IC₅₀ & Target: EC₅₀: 8 μ M (p32-kinase)^[1] PKC^{[2][3]} **In Vitro:** A p32-sphingosine-activated protein kinase responds to low concentrations of D-erythro-Sphingosine with an initial activation observed at 2.5 μ M and a peak activity at 10-20 μ M. This kinase shows a modest specificity for D-erythro-Sphingosine over other sphingosine tereoisomers, and a preference for sphingosines over ihydrosphingosines^[1]. D-erythro-Sphingosine inhibits protein kinase C in vitro^[2]. D-erythro-Sphingosine has been shown to inhibit protein kinase C, which affects cell regulation and several signal transduction pathways, and exhibits antitumor promoter activities in various mammalian cells^[3].

References:

- [1]. Pushkareva MYu, et al. Regulation of sphingosine-activated protein kinases: selectivity of activation by sphingoid bases and inhibition by non-esterified fatty acids. *Biochem J.* 1993 Sep 15;294 (Pt 3):699-703.
- [2]. Khan WA, et al. Protein kinase C and platelet inhibition by D-erythro-Sphingosine: comparison with N,N-dimethylsphingosine and commercial preparation. *Biochem Biophys Res Commun.* 1990 Oct 30;172(2):683-91.
- [3]. Pham VT, et al. A concise synthesis of a promising protein kinase C inhibitor: D-erythro-Sphingosine. *Arch Pharm Res.* 2007 Jan;30(1):22-7.
- [4]. Cheng P, et al. Protein phosphatase 2A (PP2A) activation promotes axonal growth and recovery in the CNS. *J Neurol Sci.* 2015 Dec 15;359(1-2):48-56.

CAIndexNames:

4-Octadecene-1,3-diol, 2-amino-, (2S,3R,4E)-

SMILES:

CCCCCCCCCCCC/C=C/[C@@H](O)[C@@H](N)CO

Caution: Product has not been fully validated for medical applications. For research use only.

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