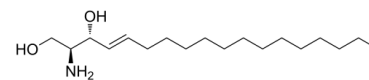


## Data Sheet

<b>Product Name:</b>	D-erythro-Sphingosine
<b>Cat. No.:</b>	CS-0020759
<b>CAS No.:</b>	123-78-4
<b>Molecular Formula:</b>	C <sub>18</sub> H <sub>37</sub> NO <sub>2</sub>
<b>Molecular Weight:</b>	299.49
<b>Target:</b>	Endogenous Metabolite; Phosphatase; PKC
<b>Pathway:</b>	Epigenetics; Metabolic Enzyme/Protease; TGF-beta/Smad
<b>Solubility:</b>	DMSO : 50 mg/mL (ultrasonic;warming;heat to 60°C)



### BIOLOGICAL ACTIVITY:

D-erythro-Sphingosine (Erythrosphingosine) is a very potent activator of **p32-kinase** with an **EC<sub>50</sub>** of 8 μM, and inhibits **protein kinase C (PKC)**. D-erythro-Sphingosine (Erythrosphingosine) is also a **PP2A** activator<sup>[1][2][3][4]</sup>. IC50 & Target: EC50: 8 μM (p32-kinase)<sup>[1]</sup>

PKC<sup>[2][3]</sup> *In Vitro*: A p32-sphingosine-activated protein kinase responds to low concentrations of D-erythro-Sphingosine with an initial activation observed at 2.5 μM and a peak activity at 10-20 μM. This kinase shows a modest specificity for D-erythro-Sphingosine over other sphingosine tereoisomers, and a preference for sphingosines over ihydrosphingosines<sup>[1]</sup>. D-erythro-Sphingosine inhibits protein kinase C in vitro<sup>[2]</sup>. 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<sup>[3]</sup>.

### References:

- [1]. Pushkareva MYu, et al. Regulation of sphingosine-activated protein kinases: selectivity of activation by sphingoid basesand 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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