D-erythro-Sphingosine

Cat. No.: HY-101047  
CAS No.: 123-78-4  
Molecular Formula: C₁₈H₃₇NO₂  
Molecular Weight: 299.49  
Target: PKC; Phosphatase; Endogenous Metabolite  
Pathway: Epigenetics; TGF-beta/Smad; Metabolic Enzyme/Protease  
Storage: Powder -20°C 3 years  
In solvent -80°C 6 months  
-20°C 1 month

SOLVENT & SOLUBILITY

In Vitro  
DMSO : 41.67 mg/mL (139.14 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td></td>
<td>3.3390 mL</td>
<td>16.6950 mL</td>
<td>33.3901 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td></td>
<td>0.6678 mL</td>
<td>3.3390 mL</td>
<td>6.6780 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td></td>
<td>0.3339 mL</td>
<td>1.6695 mL</td>
<td>3.3390 mL</td>
</tr>
</tbody>
</table>

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (6.95 mM); Clear solution  
2. Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (6.95 mM); Clear solution

BIOLOGICAL ACTIVITY

Description  
D-erythro-Sphingosine (Erythrosphingosine) is a very potent activator of p32-kinase with an EC₅₀ of 8 μM, and inhibits protein kinase C (PKC). D-erythro-Sphingosine (Erythrosphingosine) is also a PP2A activator[1][2][3][4].

IC₅₀ & Target

<table>
<thead>
<tr>
<th>p32</th>
<th>PKC</th>
<th>PP2A</th>
<th>Human Endogenous Metabolite</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 μM (EC50)</td>
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</table>

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[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


