Diethylstilbestrol

Cat. No.: HY-14598
CAS No.: 56-53-1
Molecular Formula: C₁₈H₂₀O₂
Molecular Weight: 268.35
Target: Estrogen Receptor/ERR
Pathway: Others
Storage: Powder -20°C 3 years
        4°C 2 years
        In solvent -80°C 6 months
        -20°C 1 month

SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (186.32 mM; Need ultrasonic)
Methanol : ≥ 33.33 mg/mL (124.20 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>3.7265 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>18.6324 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>37.2648 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 >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.32 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.32 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Diethylstilbestrol, a synthetic nonsteroidal estrogen used in the treatment of menopausal and postmenopausal disorders. Target: Estrogen Receptor/ERR. Diethylstilbestrol (DES), a synthetic estrogen that was used in pregnancy, is a prototype endocrine-disrupting chemical. Although prenatal exposure to DES is known to increase risks of vaginal/cervical adenocarcinoma and adverse reproductive outcomes in women, and urogenital anomalies in men, data on nonreproductive medical conditions are lacking. Comparing persons exposed prenatally to DES with those who were not exposed, the hazard ratios were 1.21 (95% confidence interval = 0.96-1.54) for diabetes, 1.27 (1.00-1.62) for all cardiovascular disease, 1.18 (0.88-1.59) for coronary artery disease, 1.28 (0.88-1.86) for myocardial
infarction, 1.12 (1.02-1.22) for high cholesterol, 1.14 (1.02-1.28) for hypertension, 1.24 (0.99-1.54) for osteoporosis, and 1.30 (0.95-1.79) for fractures. The associations did not differ by dose and timing of DES exposure, nor, in the women, by the presence or absence of vaginal epithelial changes (a marker of DES host susceptibility) [1]. The role of prenatal exposure to DES as an environmental risk factor for psychiatric disorders requires more evidence before any conclusions can be drawn [2].

REFERENCES
