Idebenone

Cat. No.: HY-N0303
CAS No.: 58186-27-9
Molecular Formula: C₁₉H₃₀O₅
Molecular Weight: 338.44
Target: Ferroptosis
Pathway: Apoptosis
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 : ≥ 100 mg/mL (295.47 mM)
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td></td>
<td>2.9547 mL</td>
<td>14.7737 mL</td>
<td>29.5473 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>0.5909 mL</td>
<td>2.9547 mL</td>
<td>5.9095 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.2955 mL</td>
<td>1.4774 mL</td>
<td>2.9547 mL</td>
</tr>
</tbody>
</table>

Preparing Stock Solutions

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: ≥ 2.5 mg/mL (7.39 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.39 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.39 mM); Clear solution

BIOLOGICAL ACTIVITY

Idebenone is a synthetic variant of coenzyme Q10 (CoQ10), which initially developed for the treatment of Alzheimer’s disease and other cognitive defects. Target: OthersIdebenone is a synthetic variant of coenzyme Q10 (CoQ10), which initially developed for the treatment of Alzheimer’s disease and other cognitive defects. Idebenone was generally well tolerated with similar numbers of adverse events in each group. One child receiving high-dose idebenone developed neutropenia after 6 months, which resolved after discontinuation of treatment. 8OH2’dG concentrations were not
increased, and did not significantly change with idebenone treatment [1]. The 2-year efficacy and safety of idebenone were studied in a prospective, randomized, double-blind multicentre study in 3 parallel groups of patients with dementia of the Alzheimer type (DAT) of mild to moderate degree. A total of 450 patients were randomized to either placebo for 12 months, followed by idebenone 90 mg tid for another 12 months (n = 153) or idebenone 90 mg tid for 24 months (n = 148) or 120 mg tid for 24 months (n = 149). idebenone showed statistically significant dose-dependent improvement in the primary efficacy variable ADAS-Total and in all the secondary efficacy variables [2].

REFERENCES

