**Frentizole**

Cat. No.: HY-15374  
CAS No.: 26130-02-9  
Molecular Formula: $\text{C}_{15}\text{H}_{13}\text{N}_{3}\text{O}_{2}\text{S}$  
Molecular Weight: 299.35  
Target: Amyloid-β  
Pathway: Neuronal Signaling  
Storage:  
- Powder: -20°C for 3 years, 4°C for 2 years  
- In solvent: -80°C for 2 years, -20°C for 1 year

**SOLVENT & SOLUBILITY**

**In Vitro**  
DMSO: 12.5 mg/mL (41.76 mM); Need ultrasonic  

<table>
<thead>
<tr>
<th>Solvent Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>3.3406 mL</td>
<td>16.7029 mL</td>
<td>33.4057 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.6681 mL</td>
<td>3.3406 mL</td>
<td>6.6811 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.3341 mL</td>
<td>1.6703 mL</td>
<td>3.3406 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: 1.25 mg/mL (4.18 mM); Clear solution; Need ultrasonic  
2. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: 1.25 mg/mL (4.18 mM); Clear solution; Need ultrasonic

**BIOLOGICAL ACTIVITY**

**Description**  
Frentizole, an FDA-approved immunosuppressant, is an $\text{A}\beta$-ABAD (binding alcohol dehydrogenase) interaction inhibitor with an $\text{IC}_{50}$ value of 200 μM. Frentizole is used in studies of diseases related to rheumatoid arthritis and systemic lupus erythematosus[^1][^2][^3].

**In Vitro**  
Frentizole (500 ng/mL, 48 hours) is effective in inhibiting thymidine incorporation into DNA when added to lymphocyte cultures alongside mitogens, and significantly inhibits the response to concanavalin A by 58% in a dose-dependent manner in lymphocytes extracted from mice peritoneal cavity[^1].  
Frentizole (62.5 ng/mL) can effectively inhibit uridine incorporation and the inhibition of uridine incorporation is independent of the phytochemical used[^1].  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Frentizole (8.2 or 79.9 mg/kg/day for young mice in animal feedings, 52 weeks) can extend the life span of NZB/NZW mice\(^2\). MCE has not independently confirmed the accuracy of these methods. They are for reference only.

<table>
<thead>
<tr>
<th>Animal Model:</th>
<th>NZB/NZW mice(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage:</td>
<td>8.2 or 79.9 mg/kg/day for young mice</td>
</tr>
<tr>
<td>Administration:</td>
<td>In animal feedings; 52 weeks</td>
</tr>
<tr>
<td>Result:</td>
<td>Showed that the average lifespan of young untreated mice was 38 weeks, in the low dose group the average lifespan was about 38 weeks, and in the high dose group the lifespan was significantly longer with an average lifespan of about 61 weeks. Significantly suppressed leukocyte counts, compared to a mean peripheral blood leukocyte count of 4160 in control mice, 3217 in low dose treated mice and 3450 in high dose treated mice. Significant increased in terminal neutrophil counts in young low and high dose treated mice compared to control.</td>
</tr>
</tbody>
</table>

REFERENCES

