Toremifene citrate

Cat. No.: HY-B0005
CAS No.: 89778-27-8
Molecular Formula: C₃₂H₃₆ClNO₈
Molecular Weight: 598.08
Target: Estrogen Receptor/ERR; Apoptosis
Pathway: Others; 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 (167.20 mM)
H₂O : < 0.1 mg/mL (insoluble)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>1.6720 mL</td>
<td>8.3601 mL</td>
<td>16.7202 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.3344 mL</td>
<td>1.6720 mL</td>
<td>3.3440 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.1672 mL</td>
<td>0.8360 mL</td>
<td>1.6720 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: ≥ 2.5 mg/mL (4.18 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (4.18 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.18 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
Toremifene citrate (Z-Toremifene citrate) is a second-generation selective estrogen-receptor modulator (SERM) in development for the prevention of osteoporosis. Toremifene citrate also potent inhibits infectious EBOV Zaire and Marburg (MARV) with IC₅₀ of 0.07 µM and 2.6 µM, respectively[1][2].
### In Vitro

Toremifene is a second-generation selective estrogen-receptor modulator (SERM) in development for the prevention of osteoporosis and other adverse effects resulting from ADT with prostate cancer\(^1\).

The growth of Ac-1 cells was inhibited by tamoxifen, toremifene and atamestane in vitro with IC50 values of 1.8±1.3μM, 1±0.3μM and 60.4±17.2μM, respectively. The combination of toremifene plus atamestane was found to be better than toremifene or atamestane alone in vitro\(^3\).

### In Vivo

The effect of this combination was then studied in vivo using Ac-1 xenografts grown in ovariectomized female SCID mice. The mice were injected with toremifene (1000μg/day), atamestane (1000μg/day), tamoxifen (100μg/day), or the combination of toremifene plus atamestane. In this study, our results indicate that the combination of toremifene plus atamestane was as effective as toremifene or tamoxifen alone but may not provide any additional benefit over toremifene alone or tamoxifen alone\(^3\).

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### REFERENCES


