Butenafine Hydrochloride

Cat. No.: HY-17396
CAS No.: 101827-46-7
Molecular Formula: C₂₃H₂₈ClN
Molecular Weight: 353.93
Target: Fungal; Antibiotic
Pathway: Anti-infection
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 : 25 mg/mL (70.64 mM; Need ultrasonic)
H₂O : 1 mg/mL (2.83 mM; Need ultrasonic)

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Solvent Concentration</th>
<th>Mass (mL) 1 mg</th>
<th>Mass (mL) 5 mg</th>
<th>Mass (mL) 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.8254 mL</td>
<td>14.1271 mL</td>
<td>28.2542 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.5651 mL</td>
<td>2.8254 mL</td>
<td>5.6508 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2825 mL</td>
<td>1.4127 mL</td>
<td>2.8254 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 (7.06 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (7.06 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (7.06 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
Butenafine Hydrochloride (KP363 Hydrochloride) is a synthetic benzylamine antifungal, works by inhibiting the synthesis of sterols by inhibiting squalene epoxidase.

IC₅₀ & Target
Antifungal; squalene epoxidase
Butenafine Hydrochloride, a benzylamine derivative, is an antifungal which is used to control dermal fungal infections such as athletes foot and ring worm. Butenafine Hydrochloride is a squalene epoxidase inhibitor, inhibiting the synthesis of ergosterol needed in fungal cell membranes. The drug has excellent penetration into the epidermis and a prolonged retention time following topical application, conferring residual therapeutic activity after treatment cessation. Butenafine possesses anti-inflammatory activity too. Butenafine hydrochloride 1% cream is safe and effective for tinea corporis cruris and tinea manuum pedis.

REFERENCES


[5]. Butenafine