Talarozole (R enantiomer)

**Cat. No.**: HY-14802
**CAS No.**: 870093-23-5
**Molecular Formula**: C_{21}H_{23}N_{5}S
**Molecular Weight**: 377.51
**Target**: Cytochrome P450
**Pathway**: Metabolic Enzyme/Protease
**Storage**: Please store the product under the recommended conditions in the Certificate of Analysis.

### SOLVENT & SOLUBILITY

**In Vitro**

DMSO : ≥ 51 mg/mL (135.10 mM)  
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Mass (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.6489 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>13.2447 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>26.4894 mL</td>
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</tbody>
</table>

Preparation of Stock Solutions

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Mass (mg)</th>
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</thead>
<tbody>
<tr>
<td>10 mM</td>
<td>0.2649 mL</td>
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<tr>
<td></td>
<td>1.3245 mL</td>
</tr>
<tr>
<td></td>
<td>2.6489 mL</td>
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</tbody>
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Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

**Description**

Talarozole R enantiomer is a potent and selective inhibitor of cytochrome P450 26-mediated breakdown of endogenous all-trans retinoic acid for the treatment of psoriasis and acne. Target: CYP26

in vitro: Talarozole R enantiomer treatment increased the mRNA expression of CRABP2, KRT4, CYP26A1 and CYP26B1 dose dependently, and decreased the expression of KRT2 and IL-1alpha compared with vehicle-treated skin. No mRNA change in retinol-metabolizing enzymes was obtained. There was no induction of epidermal thickness or overt skin inflammation in talarozole-treated skin. Immunofluorescence analysis confirmed an upregulation of KRT4 protein, but no upregulation of CYP26A1 and CYP26B1 expression was detected [1][2].

in vivo: Talarozole R enantiomer slightly diffused into the skin only when dissolved in propylene glycol, isopropyl myristate or ethanol. Although only 0.1% of the dose applied was found in the skin itself after 12-24 h, this was sufficient to achieve local concentrations well above the half-maximal inhibitory concentration value for talarozole. The distribution of talarozole within the skin was investigated: 80% was located in the epidermis, while the remaining 20% was found in the dermis [3].

### REFERENCES


Caution: Product has not been fully validated for medical applications. For research use only.

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