Cyproterone acetate

Cat. No.: HY-13604
CAS No.: 427-51-0
Molecular Formula: C₂₃H₂₇ClO₄
Molecular Weight: 402.91
Target: Androgen Receptor
Pathway: Others
Storage: Powder -20°C 3 years
Storage: Powder 4°C 2 years
Storage: Powder -80°C 6 months
Storage: Powder -20°C 1 month

SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (82.72 mM; Need ultrasonic)
Ethanol : 20 mg/mL (49.64 mM; Need ultrasonic)
H₂O : < 0.1 mg/mL (insoluble)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent 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>2.4819 mL</td>
<td>12.4097 mL</td>
<td>24.8194 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.4964 mL</td>
<td>2.4819 mL</td>
<td>4.9639 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.2482 mL</td>
<td>1.2410 mL</td>
<td>2.4819 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 (6.20 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.20 mM); Clear solution

3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.20 mM); Clear solution

4. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2 mg/mL (4.96 mM); Suspended solution; Need ultrasonic

5. Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2 mg/mL (4.96 mM); Clear solution

6. Add each solvent one by one: 10% EtOH >> 90% corn oil
   Solubility: ≥ 2 mg/mL (4.96 mM); Clear solution
**BIOLOGICAL ACTIVITY**

**Description**
Cyproterone acetate is an androgen receptor (AR) antagonist with IC50 of 7.1 nM, as well as a weak progesterone receptor agonist with weak progestational and glucocorticoid activity. Target: Androgen Receptor

Cyproterone acetate clearly shows antagonistic properties, while being a partial agonist also, showing agonism for the AR, with EC50 of 4.0 μM, at relatively high concentrations [1]. In the presence of 10 nM Testosterone, low concentrations of Cyproterone acetate inhibits T-stimulated transcription of 3XHRE-LUC, but at higher concentrations, transcription is stimulated. LH levels in Cyproterone acetate-treated rats do not dip below pretreatment levels, although they do not increase as much in the rats treated with 3.2 mg Cyproterone acetate/kg/day as in those which received 0.2 mg Cyproterone acetate/kg/day [2]. Cyproterone acetate exhibits direct negative effect on reproductive organs weight and significant reducing effect on sperm count and Ca2+ contents. SOD and GST activities significantly decrease in addition to significant increase in NO, MDA contents reflecting the oxidative status of testis in Cyproterone acetate treated rats [3].

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**REFERENCES**

