Satraplatin

Cat. No.: HY-17576
CAS No.: 129580-63-8
Molecular Formula: C₁₀H₂₂Cl₂N₂O₄Pt
Molecular Weight: 500.28
Target: DNA Alkylator/Crosslinker
Pathway: Cell Cycle/DNA Damage
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: ≥ 33 mg/mL (65.96 mM; DMSO can inactivate Satraplatin's activity)
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Mass Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.9989 mL</td>
<td>9.9944 mL</td>
<td>19.9888 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.3998 mL</td>
<td>1.9989 mL</td>
<td>3.9978 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1999 mL</td>
<td>0.9994 mL</td>
<td>1.9989 mL</td>
<td></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 (5.00 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.00 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.00 mM); Clear solution

BIOLOGICAL ACTIVITY

Description: Satraplatin is an alkylating agent, with potent antitumor effect.

In Vitro: Satraplatin has potent antitumor activity. Satraplatin combined with dichloroacetate (DCA) inhibits UMC-11 cells with an IC₅₀ of 1.36 ± 0.11 μM[1]. Satraplatin also suppresses CDDP-resistant (KB-R) cells (IC₅₀ 7.04 μM), and causes G2/M arrest in KB-R cells[2].
Cells are harvested, counted and distributed to microtiter plates in 100 μL medium at a density of $1 \times 10^4$ cells/well. Appropriate dilutions of test compounds (Satraplatin, etc.) are added to a total volume of 200 μL/well and plates incubated under tissue culture conditions for four days. Stock solutions of the compounds are prepared in either 70% ethanol or DMSO and diluted more than 100-fold for the assays. Solvent controls are included in all tests. Dose response curves are obtained by assessing cell proliferation at twofold drug dilutions in triplicate and used for calculation of IC$_{50}$ values. Cell growth is quantified using a modified tetrazolium dye assay (MTT) and by measurement of the reduced formazane dye at 450 nm wavelength (medium control set to 100% proliferation)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES
