NCC007

Cat. No.: HY-128677
Molecular Formula: C₂₂H₂₈F₃N₇
Molecular Weight: 447.5
Target: Casein Kinase
Pathway: Cell Cycle/DNA Damage; Stem Cell/Wnt
Storage: 4°C, sealed storage, away from moisture and light
* In solvent: -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)

SOLVENT & SOLUBILITY

In Vitro
DMSO: 125 mg/mL (279.33 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>2.2346 mL</td>
<td>11.1732 mL</td>
<td>22.3464 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.4469 mL</td>
<td>2.2346 mL</td>
<td>4.4693 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.2235 mL</td>
<td>1.1173 mL</td>
<td>2.2346 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: ≥ 2.08 mg/mL (4.65 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.65 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.65 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
NCC007 is a dual casein kinase Iα (CKIα) and δ (CKIδ) inhibitor with IC₅₀s of 1.8 and 3.6 μM, respectively. NCC007 can be used in research of modulating mammalian circadian rhythms[1].

IC₅₀ & Target
CKIα
1.8 μM (IC₅₀)

CKIδ
3.6 μM (IC₅₀)

In Vivo
NCC007 (5-15 mM, infused into the lateral ventricle) controls circadian rhythms through CKI inhibition[1].
Animal Model: Adult C57BL/6J background male mice (8 weeks old)[1]
Dosage: 5, 15 mM
Administration: Infused into the lateral ventricle, constant dark condition
Result: Showed more period lengthening effect with 0.15 hours at 5 mM and 15 mM.

REFERENCES