**JNJ-42226314**

**Cat. No.:** HY-133130  
**CAS No.:** 1252765-13-1  
**Molecular Formula:** C₂₆H₂₄FN₅O₂S  
**Molecular Weight:** 489.56  
**Target:** MAGL  
**Pathway:** Metabolic Enzyme/Protease  
**Storage:**  
- Powder: -20°C, 3 years, 4°C, 2 years, In solvent: -80°C, 6 months, -20°C, 1 month

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**SOLVENT & SOLUBILITY**

**In Vitro**  
DMSO: 250 mg/mL (510.66 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Prepared Stock Solutions</th>
<th>Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td></td>
<td>2.0427 mL</td>
<td>10.2133 mL</td>
<td>20.4265 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td></td>
<td>0.4085 mL</td>
<td>2.0427 mL</td>
<td>4.0853 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td></td>
<td>0.2043 mL</td>
<td>1.0213 mL</td>
<td>2.0427 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: ≥ 6.25 mg/mL (12.77 mM); Clear solution  
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 6.25 mg/mL (12.77 mM); Clear solution  
3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 6.25 mg/mL (12.77 mM); Clear solution

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**BIOLOGICAL ACTIVITY**

**Description**  
JNJ-42226314 is a competitive, highly selective and reversible non-covalent monoacylglycerol lipase (MAGL) inhibitor. JNJ-42226314 demonstrates dose-dependent enhancement of the major endocannabinoid 2-arachidonoylglycerol (2-AG) as well as efficacy in models of neuropathic and inflammatory pain[1].

**In Vitro**  
JNJ-42226314 has IC₅₀ₐ₅ of 1.13 nM, 1.88 nM, 0.67 nM, 0.97 nM for human Hela cells, human PBMC, mouse brain and rat brain, respectively[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.
JNJ-42226314 (i.p.; 3 mg/kg and 30 mg/kg; 120 min) dose-dependently elevates hippocampal 2-AG in vivo\(^1\).
JNJ-42226314 (i.p.; 30 mg/kg) significantly increases total wake time for up to 8 hours afterward, whereas total wake time was only elevated for 2 hr following a 3 mg/kg dose\(^1\).
JNJ-42226314 (i.p.; 30 mg/kg) is antinociceptive in the rat complete Freund’s adjuvant (CFA) model of inflammatory pain\(^1\).
JNJ-42226314 has \(t_{1/2}\) values of 11.4, 27.6, 27.2 min for MAGL in human, mouse and rat, respectively\(^1\).

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**Animal Model:** Male C57Bl/6 mice weighing 20-30g and male Sprague-Dawley rats weighing 300-400 g\(^1\)

**Dosage:** 3 mg/kg and 30 mg/kg

**Administration:** i.p.; 120 min

**Result:** Dose-dependently elevated hippocampal 2-AG in vivo.

### REFERENCES


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

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