**MF63**

Cat. No.: HY-13283  
CAS No.: 892549-43-8  
Molecular Formula: C₂₃H₁₁ClN₄  
Molecular Weight: 378.81  
Target: PGE synthase  
Pathway: Immunology/Inflammation  
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 : ≥ 43 mg/mL (113.51 mM)  
*"≥" means soluble, but saturation unknown.*

<table>
<thead>
<tr>
<th>Solvent Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.6398 mL</td>
<td>13.1992 mL</td>
<td>26.3985 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.5280 mL</td>
<td>2.6398 mL</td>
<td>5.2797 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2640 mL</td>
<td>1.3199 mL</td>
<td>2.6398 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 (6.60 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 2.5 mg/mL (6.60 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**

MF63 is a selective mPGES-1 inhibitor with an IC₅₀ of 0.9 nM and 1.3 nM for pig mPGES-1 and human mPGES-1 enzyme, respectively. IC₅₀ value: 0.9 nM (pig mPGES-1); 1.3 nM (human mPGES-1)  
Target: mPGES-1  
MF63 potently inhibited the human mPGES-1 enzyme with a high degree (>1000-fold) of selectivity over other prostanoid synthases. In rodent species, MF63 strongly inhibited guinea pig mPGES-1 but not the mouse or rat enzyme. When tested in the guinea pig and a knock-in (KI) mouse expressing human mPGES-1, the compound selectively suppressed the synthesis of PGE(2), but not other prostaglandins inhibitable by nonsteroidal anti-inflammatory drugs (NSAIDs), yet retained NSAID-like efficacy at inhibiting lipopolysaccharide-induced pyresis, hyperalgesia, and iodoacetate-induced osteoarthritic pain.
REFERENCES


[3]. Baragatti B, Coceani F.,Dual, constrictor-to-dilator, response of the mouse ductus arteriosus to the microsomal prostaglandin E synthase-1 inhibitor, 2-(6-chloro-1H-phenanthro[9,10d]imidazole- 2-yl)isophthalonitrile.,Neonatology. 2011;100(2):139-46. Epub
