T0070907

Cat. No.: HY-13202  
CAS No.: 313516-66-4  
Molecular Formula: C₁₂H₈ClN₃O₃  
Molecular Weight: 277.66  
Target: PPAR; RAD51  
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 : 10 mg/mL (36.02 mM; Need ultrasonic)

<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>3.6015 mL</td>
<td>18.0076 mL</td>
<td>36.0153 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.7203 mL</td>
<td>3.6015 mL</td>
<td>7.2031 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.3602 mL</td>
<td>1.8008 mL</td>
<td>3.6015 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: ≥ 1 mg/mL (3.60 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 1 mg/mL (3.60 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 1 mg/mL (3.60 mM); Clear solution

BIOLOGICAL ACTIVITY

Description  
T0070907 is a potent PPARγ antagonist with a Ki of 1 nM.

IC₅₀ & Target  
<table>
<thead>
<tr>
<th>PPARγ</th>
<th>PPARδ</th>
<th>PPARα</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 nM (Ki)</td>
<td>1.8 μM (Ki)</td>
<td>0.85 μM (Ki)</td>
</tr>
</tbody>
</table>

In Vitro  
T0070907 (50 μM) pre-treatment impairs repair of IR-induced DNA DSBs in both ME-180 and SiHa cells treated with...
irradiated (4 Gy). T0070907 (0-50 μM) significantly decreases the levels of DNA-PKcs and RAD51 proteins in ME-180 and SiHa cells[1]. T0070907 (50 μM) treatment reduces the levels of α- and β-tubulin protein in a time-dependent manner, decreases the synthesis of DNA, and prevents the radiation-induced alterations in the cell cycle regulatory proteins of ME180 and SiHa cells[2]. T0070907 (10 μM) has cytotoxicity in an adipocyte-specific and PPARγ-independent manner. T0070907 increases oxidative stress in immature adipocytes[3]. T0070907 (1 μM) blocks the induction of adipogenesis by various treatments of the adipogenic cell line 3T3-L1. T0070907 covalently modifies PPAR on cysteine 313 in helix 3 of human PPAR γ[4].

PROTOCOL

**Kinase Assay [4]**

To determine the binding affinity of T0070907 to the PPARs, scintillation proximity assay (SPA) is performed with the following modifications. A 90 μL reaction contains SPA buffer (10 mM K2HPO4, 10 mM KH2PO4, 2 mM EDTA, 50 mM NaCl, 1 mM dithiothreitol, 2 mM CHAPS, 10% (v/v) glycerol, pH 7.1), 50 ng of GST-PPAR (or 150 ng of GST-PPARγ), 5 nM [3H]labeled radioligands, and 5 μL of T0070907 in Me2SO. After incubation for 1 h at room temperature, 10 μL of polylysine-coated SPA beads (at 20 mg/mL in SPA buffer) are added, and the mixture is incubated for 1 h before reading in Packard Topcount. [3H]Rosiglitazone is used for PPAR, and [3H]GW2433 is used for PPAR and PPARγ.

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

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REFERENCES


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

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