**Product Data Sheet**

**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

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**SOLVENT & SOLUBILITY**

### In Vitro

DMSO: 10 mg/mL (36.02 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>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

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**BIOLOGICAL ACTIVITY**

**Description**

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

**IC₅₀ & Target**

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


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

Tel: 609-228-6898       Fax: 609-228-5909       E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA