WY-14643 (Pirinixic Acid)

**Cat. No.:** A4305  
**CAS No.:** 50892-23-4  
**Formula:** C14H14ClN3O2S  
**M.Wt:** 323.8  
**Synonyms:** WY 14643, WY14643  
**Target:** Metabolism  
**Pathway:** PPAR  
**Storage:** Store at -20°C

### Solvent & Solubility

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Concentration</th>
<th>Mass (mg)</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>3.0883 mL</td>
<td>15.4416 mL</td>
<td>30.8833 mL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.6177 mL</td>
<td>3.0883 mL</td>
<td>6.1767 mL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.3088 mL</td>
<td>1.5442 mL</td>
<td>3.0883 mL</td>
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<td></td>
</tr>
</tbody>
</table>

Please refer to the solubility information to select the appropriate solvent.

### Biological Activity

**Short summary**  
PPARα agonist, selective and highly potent

**IC₅₀ & Target**  
10.11 µM (human) (PPARα)

**Cell Viability Assay**

- **Cell Line:** Human ECs and U937 cells
- **Preparation method:** The solubility of this compound in DMSO is > 16.2 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 °C for several months.
- **Reacting conditions:** 0, 2.5, 25 or 250 µM; 24 hrs
Applications: Pretreatment of ECs with 250 μM WY-14643 significantly down-regulated the VCAM-1 expression level to 52 ± 2% of TNF-α-stimulated cells. Besides, pretreatment of ECs with WY-14643 before TNF-α stimulation significantly reduced U937 cell adhesion to 37.3 ± 4.3 × 103 cells/cm2. Northern blot analysis indicated that the increased VCAM-1 mRNA level caused by TNF-α stimulation could be concentration-dependently inhibited by pretreatment with WY-14643.

Animal experiment

<table>
<thead>
<tr>
<th>Animal models:</th>
<th>High fat-fed rats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage form:</td>
<td>3 mg/kg/day; p.o.; for 2 weeks</td>
</tr>
<tr>
<td>Applications:</td>
<td>In high fat-fed rats, WY-14643 lowered basal plasma levels of glucose, triglycerides and leptin, muscle triglyceride as well as total LCACoAs. Besides, WY-14643 significantly reduced visceral fat weight and total liver triglyceride content, without increasing body weight gain. In addition, WY-14643 enhanced whole body insulin sensitivity, thus increasing insulin-mediated muscle glucose metabolic index in red and white muscles as well as in white adipose tissue, and reducing muscle triglyceride as well as LCACoA accumulation.</td>
</tr>
</tbody>
</table>

Other notes: Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations


References


Caution

FOR RESEARCH PURPOSES ONLY.
NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.
Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.