FH535

Cat. No.: HY-15721  
CAS No.: 108409-83-2  
Molecular Formula: \(C_{13}H_{10}Cl_{2}N_{2}O_{4}S\)  
Molecular Weight: 361.2  
Target: PPAR; Wnt; β-catenin  
Pathway: Cell Cycle/DNA Damage; Stem Cell/Wnt  
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 : 33.33 mg/mL (92.28 mM; Need ultrasonic)  
\(H_2O\) : < 0.1 mg/mL (insoluble)

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Solvent</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td></td>
<td>2.7685 mL</td>
<td>13.8427 mL</td>
<td>27.6855 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>0.5537 mL</td>
<td>2.7685 mL</td>
<td>5.5371 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.2769 mL</td>
<td>1.3843 mL</td>
<td>2.7685 mL</td>
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</tr>
</tbody>
</table>

Preparing Stock Solutions

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 (6.92 mM); Clear solution  
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: 2.5 mg/mL (6.92 mM); Suspended solution; Need ultrasonic

**BIOLOGICAL ACTIVITY**

**Description**  
FH535 is an inhibitor of Wnt/β-catenin and PPAR, with anti-tumor activities.

<table>
<thead>
<tr>
<th>IC_{50} &amp; Target</th>
<th>PPAR</th>
<th>Wnt</th>
<th>β-catenin</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Vitro</td>
<td>FH535 is an inhibitor of Wnt/β-catenin and PPAR. FH535 inhibits PPARγ and PPARδ transactivation in HCT116 cells. FH535 (15 μM) activities depend on functional PPARδ but does not require a cysteine residue in the PPAR ligand-binding domain. FH535 inhibits recruitment of the coactivators GRIP1 and β-catenin to PPARδ and PPARγ. FH535 shows toxic effects on 12 carcinoma cell lines expressing wnt/β-catenin pathway[1]. FH535 (20 μM) suppresses the β-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
catenin pathway in pancreatic cancer cells, and inhibits pancreatic cancer cell migration. Furthermore, FH535 (20, 40 μM) inhibits pancreatic cancer cell invasion and cell growth\(^2\). FH535 represses angiogenesis-related genes in pancreatic cancer cells\(^3\).

<table>
<thead>
<tr>
<th>In Vivo</th>
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</thead>
<tbody>
<tr>
<td>FH535 (25 mg/kg, i.p.) exhibits an anti-tumor effect on pancreatic cancer xenografts in mice. FH535 also represses angiogenesis in pancreatic cancer xenografts(^2).</td>
</tr>
</tbody>
</table>

### PROTOCOL

#### Cell Assay \(^2\)

Cell growth is evaluated using the MTT assay. Cells (5 × 10^4/well) are seeded in 24-well tissue culture plates. Blank control is treated with DMSO. After FH535 treatment, MTT is added to each well (final concentration, 0.5 mg/mL), followed by 4-hour incubation at 37°C. The medium is removed, and 800 μL of DMSO is added to each well. The absorbance of the mixture is measured at 490 nm using a microplate enzyme-linked immunosorbent assay reader. The relative cell viability is calculated as follows: relative cell viability = (mean experimental absorbance/mean control absorbance) ×100\(^\%\)\(^2\).

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

#### Animal Administration \(^3\)

Four-week-old female BALB/c athymic nude mice receive humane care. PANC-1 cells stably expressing firefly luciferase are injected into the left flanks of the mice in a total volume of 100 μL (0.5 × 10^7 cells), and the mice are randomly assigned to a DMSO [intraperitoneally injected with 100 μL DMSO/DMEM (1:1)] or FH535 group [intraperitoneally injected with 25 mg/kg FH535 dissolved in 100 μL DMSO/DMEM (1:1)]. Treatment is conducted every 2 days for 20 days; tumor volume is measured with a caliper using the formula: volume = length × width^2/2. At the end of the experiment, the mice are anaesthetized and given D-luciferin in PBS. Twenty minutes after the injection, bioluminescence is imaged with a charge-coupled device camera. Then, the tumor tissue is stripped and formalin-fixed, paraffin-embedded, cut into 4-μm sections, and immunohistochemically stained\(^3\).

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

### CUSTOMER VALIDATION


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### REFERENCES


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

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