Pulsatilla saponin D

Cat. No.: HY-N0834
CAS No.: 68027-15-6
Molecular Formula: C₄₇H₇₆O₁₇
Molecular Weight: 913.1
Target: Others
Pathway: Others
Storage: 4°C, protect from light

SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 39 mg/mL (42.71 mM)
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>1.0952 mL</td>
<td>5.4759 mL</td>
<td>10.9517 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.2190 mL</td>
<td>1.0952 mL</td>
<td>2.1903 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.1095 mL</td>
<td>0.5476 mL</td>
<td>1.0952 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: ≥ 2.08 mg/mL (2.28 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (2.28 mM); Clear solution

3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (2.28 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Pulsatilla saponin D(SB365) isolated from the root of Pulsatilla koreana, has exhibited potential beneficial effects as a chemopreventive agent for critical health conditions including cancer. IC₅₀ value: Target: SB365 effectively inhibited the growth of gastric cancer cells. Its apoptotic effect was accompanied by increased evidence of cleaved caspase-3 and poly(ADP ribose) polymerase. To elucidate the anticancer mechanism of SB365, we used an array of 42 different receptor tyrosine kinases (RTKs). Of the 42 different phospho-RTKs, SB365 strongly inhibited expression of activated c-mesenchymal-epithelial transition factor (c-Met) in gastric cancer cells [1]. SB365 strongly suppressed the growth and proliferation of 5 human pancreatic cancer cell lines (MIAPaCa-2, BXPC-3, PANC-1, AsPC-1 and HPAC).
apoptotic effect of SB365 was demonstrated by increased levels of cleaved caspase-3 and decreased Bcl-2 expression via mitochondrial membrane potential, as well as elevated numbers of terminal deoxynucleotidyl-transferase-mediated dUTP nick end labeling (TUNEL)-positive apoptotic cells [2]. SB365 strongly suppressed the growth and proliferation of colon cancer cells and induced their apoptosis. Also, SB365 showed anti-angiogenic activity by decreasing the expression of HIF-1α and VEGF. These results were confirmed by an in vivo study showing that SB365 significantly inhibited tumor growth by the induction of apoptosis and inhibition of angiogenesis with stronger anticancer activity than 5-FU [3].

REFERENCES