Pulsatilla saponin D

**Cat. No.:** HY-N0834  
**CAS No.:** 68027-15-6  
**Molecular Formula:** C_{47}H_{76}O_{17}  
**Molecular Weight:** 913.1  
**Target:** Apoptosis  
**Pathway:** Apoptosis  
**Storage:** 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (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% (20% SBE-β-CD in saline)  
   Solubility: ≥ 2.08 mg/mL (2.28 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   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 (MIA PaCa-2, BXPC-3, PANC-1, AsPC-1 and HPAC). The
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

