**Methyl protodioscin**

Cat. No.: HY-N0863  
CAS No.: 54522-52-0  
Molecular Formula: C₅₂H₈₆O₂₂  
Molecular Weight: 1063.23  
Target: Apoptosis  
Pathway: Apoptosis  
Storage: 4°C, protect from light

**Solvent & Solubility**

<table>
<thead>
<tr>
<th>Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>0.9405 mL</td>
<td>4.7027 mL</td>
<td>9.4053 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.1881 mL</td>
<td>0.9405 mL</td>
<td>1.8811 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.0941 mL</td>
<td>0.4703 mL</td>
<td>0.9405 mL</td>
</tr>
</tbody>
</table>

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

**BIOLOGICAL ACTIVITY**

**Description**

Methyl protodioscin (NSC-698790) is a furostanol bisglycoside with antitumor properties; shows to reduce proliferation, cause cell cycle arrest. IC₅₀ value: Target: in vitro: MPD showed growth inhibitory effects in A549 cells in a dose- and time-dependent manner. The significant G2/M cell cycle arrest and apoptotic effect were also seen in A549 cells treated with MPD. MPD-induced apoptosis was accompanied by a significant reduction of mitochondrial membrane potential, release of mitochondrial cytochrome c to cytosol, activation of caspase-3, downregulation of Bcl-2, p-Bad, and upregulation of Bax [1]. In THP-1 macrophages, MPD increases levels of ABCA1 mRNA and protein in dose- and time-dependent manners, and apoA-1-mediated cholesterol efflux. MPD also decreases the gene expressions of HMGCR, FAS and ACC for cholesterol and fatty acid synthesis [2].

**REFERENCES**


[2]. Ma W, et al. Methyl protodioscin increases ABCA1 expression and cholesterol efflux while inhibiting gene expressions for synthesis of cholesterol and triglycerides by suppressing SREBP transcription and microRNA 33a/b levels. Atherosclerosis. 2015 Apr;239
Caution: Product has not been fully validated for medical applications. For research use only.

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