Cyclovirobuxine D

Cat. No.: HY-N0107
CAS No.: 860-79-7
Molecular Formula: C₂₆H₄₆N₂O
Molecular Weight: 402.66
Target: Apoptosis; Autophagy; mTOR; Akt
Pathway: Apoptosis; Autophagy; PI3K/Akt/mTOR
Storage: Please store the product under the recommended conditions in the COA.

BIOLOGICAL ACTIVITY

Description
Cyclovirobuxine D (CVB-D) is the main active component of the traditional Chinese medicine Buxus microphylla. Cyclovirobuxine D induces autophagy and attenuates the phosphorylation of Akt and mTOR[1]. Cyclovirobuxine D inhibits cell proliferation of gastric cancer cells through suppression of cell cycle progression and inducement of mitochondria-mediated apoptosis[2]. Cyclovirobuxine D is beneficial for heart failure induced by myocardial infarction [3].

In Vitro
Cyclovirobuxine D (0-240 µM; 24-72 hours) shows a concentration- and time-dependent reduced cell viability after CVB-D treatment, only 10% MGC-803 cells and 20% MKN28 cells are alive at 72 h after treatment with 240 µM[2]. Cyclovirobuxine D (0-120 µM; 48 hours) arrests the cell cycle of gastric cancer cells at S phase in a concentration-dependent manner[2]. Cyclovirobuxine D (0-120 µM; 48 hours) leads to apoptosis in gastric cancer cells in a concentration-dependent manner, especially early stage apoptosis. Cyclovirobuxine D (0-120 µM; 48 hours) causes apoptosis via up-regulation of the apoptosis-related proteins, cleaved Caspase-3 and ratio of Bax/Bcl-2, in gastric cancer cells[2].

Cell Viability Assay[2]
- Cell Line: MGC-803 and MKN28 cells
- Concentration: 0, 30, 60, 120 and 240 µM
- Incubation Time: 24, 48, 72 hours
- Result: Reduced Cell Viability and Colony Formation Ability of Gastric Cancer Cells

Cell Cycle Analysis[2]
- Cell Line: MGC-803 and MKN28 cells
- Concentration: 0, 30, 60, and 120 µM
- Incubation Time: 48 hours
- Result: Arrested cell cycle progressions of MGC-803 and MKN28 cells.

Apoptosis Analysis[2]
### Western Blot Analysis

<table>
<thead>
<tr>
<th>Cell Line</th>
<th>MGC-803 and MKN28 cells</th>
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<tbody>
<tr>
<td>Concentration</td>
<td>0, 30, 60, and 120 µM</td>
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<tr>
<td>Incubation Time</td>
<td>48 hours</td>
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<tr>
<td>Result</td>
<td>Up-regulated cleaved Caspase-3 and Bax and decreased the expression of Bcl-2 expression.</td>
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### REFERENCES

