Episilvestrol

Cat. No.: HY-15359  
CAS No.: 697235-39-5  
Molecular Formula: C₃₄H₃₈O₁₃  
Molecular Weight: 654.66  
Target: Eukaryotic Initiation Factor (eIF)  
Pathway: Cell Cycle/DNA Damage  
Storage: Powder  
-20°C  3 years  
4°C  2 years   
In solvent  
-80°C  6 months  
-20°C  1 month

Solvent & Solubility

In Vitro  
10 mM in DMSO

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent</td>
<td>Mass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concentration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 mM</td>
<td>1.5275 mL</td>
<td>7.6376 mL</td>
<td>15.2751 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.3055 mL</td>
<td>1.5275 mL</td>
<td>3.0550 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1528 mL</td>
<td>0.7638 mL</td>
<td>1.5275 mL</td>
</tr>
</tbody>
</table>

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

BIOLOGICAL ACTIVITY

Description: Episilvestrol is a derivative of silvestrol, isolated from the fruits and twigs of Aglaia silvestris, and is a specific eIF4A-targeting translation inhibitor, with antitumor activity.

IC₅₀ & Target: eIF4A[¹]

In Vitro: Episilvestrol is a specific eIF4A-targeting translation inhibitor, with antitumor activity[¹]. Episilvestrol is cytotoxic activity against several human cancer cell lines, such as Lu1, LNCaP, MCF-7 and HUVEC cells, with ED₅₀s of 3.8, 3.8, 5.5 and 15.3 nM, respectively[²]. The GI₅₀s of Episilvestrol against the cell proliferation of NCI-H460 and MCF-7 cells are 17.96 nM and 17.96 nM after first test and 15.6 nM and 18.7 nM after 2 months via SRB assay. Episilvestrol also suppresses HK1 cells and EBV-positive C666.1 NPC cells[³].

PROTOCOL

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A total of $1 \times 10^4$ HK1 cells/well or $3 \times 10^4$ C666.1 cells/well are seeded into 96-multiwell microtiter plates. At 24 h following seeding, the medium is aspirated and replaced with fresh medium containing various concentrations of silvestrol or Episilvestrol. Vehicle control cultures receive DMSO alone. The cells are then incubated for 24 h at 37°C in an atmosphere containing 5% CO$_2$. The number of viable cells at the end of the incubation period is measured using MTS assay. Absorbance at 490 nm is read and subtracted with non-specific absorbance measured at 630 nm. Wells containing medium without cells serve as blanks. Cell viability is calculated as a percentage compared to the control cells, which are arbitrarily assigned 100% viability. The half maximal inhibitory concentration (IC$_{50}$) values are graphically obtained from the dose-response curves$^{[3]}$.

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

REFERENCES

