Eeyarestatin I

Cat. No.: HY-110078
CAS No.: 412960-54-4
Molecular Formula: C₂₇H₂₅Cl₂N₇O₇
Molecular Weight: 630.44
Target: p97; Apoptosis
Pathway: Cell Cycle/DNA Damage; Apoptosis
Storage: -20°C, sealed storage, away from moisture
* In solvent: -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

SOLVENT & SOLUBILITY

In Vitro
DMSO: 25 mg/mL (39.65 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>1.5862 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.3172 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.1586 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: 1.25 mg/mL (1.98 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description
Eeyarestatin I, a potent endoplasmic reticulum-associated protein degradation (ERAD) inhibitor, is a potent protein translocation inhibitor. Eeyarestatin I targets the p97-associated deubiquitinating process (PAD) and inhibits atx3-dependent deubiquitination. Eeyarestatin I induces cell death via the proapoptotic protein NOXA and has anticancer effects [1][2][3][4].

IC₅₀ & Target
Endoplasmic reticulum-associated protein degradation (ERAD)[1][2]

In Vitro
Eeyarestatin I (2.5-40 μM; 48 hours; A549 and H358 cells) treatment causes a dose-dependent cell death of both A549 and H358 cells[1].
Eeyarestatin I (2.5-40 μM; 48 hours; A549 and H358 cells) treatment increases endoplasmic reticulum (ER) stress markers including Bip and CHOP as low as 20 μM. Eeyarestatin I treatment shows a dose dependent ubiquitination of key proteins including PERK and IRE1α[1].
Eeyarestatin I (20 μM; 48 hours; A549 and H358 cells) treatment induces cell migration and cell invasion[1].
Eeyarestatin 1 prevents the transfer of nascent proteins from the membrane-targeting complex to the ER translocation
machinery, most probably by inactivating the Sec61 complex[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

<table>
<thead>
<tr>
<th>Cell Line</th>
<th>A549 and H358 cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration</td>
<td>2.5 μM, 5 μM, 10 μM, 20 μM, 40 μM</td>
</tr>
<tr>
<td>Incubation Time</td>
<td>48 hours</td>
</tr>
<tr>
<td>Result</td>
<td>Caused dose dependent cell death of both A549 and H358 cells.</td>
</tr>
</tbody>
</table>

Western Blot Analysis[1]

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<tr>
<td>Incubation Time</td>
<td>48 hours</td>
</tr>
<tr>
<td>Result</td>
<td>Increased ER stress markers including Bip and CHOP.</td>
</tr>
</tbody>
</table>

REFERENCES


Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898            Fax: 609-228-5909            E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA