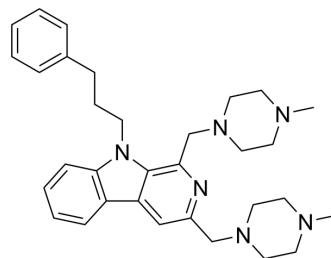


Antitumor agent-82

Cat. No.:	HY-151914
Molecular Formula:	C ₃₂ H ₄₂ N ₆
Molecular Weight:	510.72
Target:	Autophagy; Atg7
Pathway:	Autophagy
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Antitumor agent-82 (compound 6g) is a potent anti-tumor agent. Antitumor agent-82 shows anti-proliferative activity. Antitumor agent-82 induces cell Autophagy by the ATG5/ATG7 signaling pathway ^[1] .																
In Vitro	<p>Antitumor agent-82 (compound 6g) (0-100 μM; 48 h) shows anti-proliferative activity with IC₅₀s of 24.8, 13.5, 11.5, 2.71, 2.02, 4.53 μM for BGC-823, MCF7, A375, 786-O, HT-29, Blu-87 cells, respectively^[1].</p> <p>Antitumor agent-82 (0-4 μM; 0-7 days) inhibits cell growth in a dose and time-dependent manner against HCT116 cells^[1].</p> <p>Antitumor agent-82 (0-5 μM; 0-60 h) activates autophagy by the ATG5/ATG7 signaling pathway in HCT116 cells^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Proliferation Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>BGC-823, MCF7, A375, 786-O, HT-29, Blu-87 cells</td> </tr> <tr> <td>Concentration:</td> <td>0-100 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>48 h</td> </tr> <tr> <td>Result:</td> <td>Showed antiproliferative activity with IC₅₀s of 24.8, 13.5, 11.5, 2.71, 2.02, 4.53 μM for BGC-823, MCF7, A375, 786-O, HT-29, Blu-87 cells, respectively.</td> </tr> </table> <p>Western Blot Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>HCT116 cells</td> </tr> <tr> <td>Concentration:</td> <td>0-5 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>0-60 h</td> </tr> <tr> <td>Result:</td> <td>Induced autophagy with no influences on the expression of caspase-3, cleaved caspase-3 and p53 protein, significantly increased the expression of LC3-II and p62.</td> </tr> </table>	Cell Line:	BGC-823, MCF7, A375, 786-O, HT-29, Blu-87 cells	Concentration:	0-100 μM	Incubation Time:	48 h	Result:	Showed antiproliferative activity with IC ₅₀ s of 24.8, 13.5, 11.5, 2.71, 2.02, 4.53 μM for BGC-823, MCF7, A375, 786-O, HT-29, Blu-87 cells, respectively.	Cell Line:	HCT116 cells	Concentration:	0-5 μM	Incubation Time:	0-60 h	Result:	Induced autophagy with no influences on the expression of caspase-3, cleaved caspase-3 and p53 protein, significantly increased the expression of LC3-II and p62.
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In Vivo	<p>Antitumor agent-82 (45 mg/kg; i.p.; every two days for 16 days) shows anti-cancer activity for mouse^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>6-week-old male BALB/c mice^[1]</td> </tr> </table>	Animal Model:	6-week-old male BALB/c mice ^[1]														
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Dosage:	45 mg/kg
Administration:	I.p.; every two days for 16 days
Result:	Reduced tumor volume and resulted in a considerable reduction of the tumor weight of 69.69%.

REFERENCES

[1]. Ao J, et al. Design, synthesis and pharmacological evaluation of β -carboline derivatives as potential antitumor agent via targeting autophagy. Eur J Med Chem. 2022 Nov 26;246:114955.

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

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