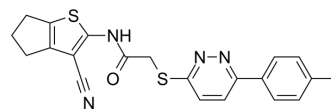


Telomerase-IN-4

Cat. No.:	HY-152076
CAS No.:	2892295-10-0
Molecular Formula:	C ₂₁ H ₁₈ N ₄ OS ₂
Molecular Weight:	406.52
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Telomerase-IN-4 is a potent telomerase inhibitor. Telomerase-IN-4 has antiproliferative activity and induces apoptosis ^[1] .																								
In Vitro	<p>Telomerase-IN-4 (compound 8e; 0.1-100 µg/mL; 72 h) has antitumor effects against both cancer cell lines with IC₅₀ values of 9.47 and 17.09 µg/mL for MCF-7 and A549 cells, respectively^[1].</p> <p>Telomerase-IN-4 (9.467 µg/mL; 48 h) arrests cell cycle at the S phase and induces apoptosis in MCF-7 cells^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>MCF-7 and A549 cells</td> </tr> <tr> <td>Concentration:</td> <td>0.1, 1, 10, and 100 µg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>72 h</td> </tr> <tr> <td>Result:</td> <td>Inhibited cell growth in a dose-dependent manner.</td> </tr> </table> <p>Apoptosis Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>MCF-7 cells</td> </tr> <tr> <td>Concentration:</td> <td>9.467 µg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>48 h</td> </tr> <tr> <td>Result:</td> <td>Had an apoptosis percentage of 42.51%.</td> </tr> </table> <p>Cell Cycle Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>MCF-7 cells</td> </tr> <tr> <td>Concentration:</td> <td>9.467 µg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>48 h</td> </tr> <tr> <td>Result:</td> <td>Arrested cell cycle at the S phase of cell growth by more than 1.46 folds compared to that of the control.</td> </tr> </table>	Cell Line:	MCF-7 and A549 cells	Concentration:	0.1, 1, 10, and 100 µg/mL	Incubation Time:	72 h	Result:	Inhibited cell growth in a dose-dependent manner.	Cell Line:	MCF-7 cells	Concentration:	9.467 µg/mL	Incubation Time:	48 h	Result:	Had an apoptosis percentage of 42.51%.	Cell Line:	MCF-7 cells	Concentration:	9.467 µg/mL	Incubation Time:	48 h	Result:	Arrested cell cycle at the S phase of cell growth by more than 1.46 folds compared to that of the control.
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	Western Blot Analysis ^[1]	
	Cell Line:	MCF-7 cells
	Concentration:	9.467 µg/mL
	Incubation Time:	48 h
	Result:	Decreased in ALT and AST levels by 36.12 and 29.77%, respectively.
In Vivo	Telomerase-IN-4 (5 mg/kg; i.p.; three times per week for two weeks; Swiss albino female mice) has anticancer activity and inhibits tumor growth ^[1] .	
	MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Swiss albino female mice (25-30 g) ^[1]
	Dosage:	5 mg/kg
	Administration:	Intraperitoneal injection three; times per week for two weeks
	Result:	Reduced both the weight and volume of the tumor by 74.34 and 62.12%, respectively.

REFERENCES

[1]. Pharmacophoric Features and Synthesis of Novel Analogues as Promising Telomerase Inhibitors with In Vitro and In Vivo Evaluations. J Med Chem. 2022 Dec 16.

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

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