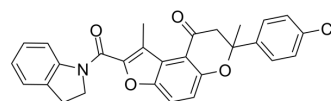


M47

Cat. No.:	HY-148764		
CAS No.:	890808-56-7		
Molecular Formula:	C ₂₈ H ₂₂ ClNO ₄		
Molecular Weight:	471.93		
Target:	Apoptosis		
Pathway:	Apoptosis		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



BIOLOGICAL ACTIVITY

Description	M47 is a small molecule that selectively destabilizes Cryptochrome 1 (CRY1) and increases degradation of the CRY1 in the nucleus. M47 enhances apoptosis in Ras-transformed P53-deficient mouse skin fibroblast lines and enhances life span in p53 knockout mice. M47 can be used in research of cancer ^[1] .								
In Vitro	<p>M47 (0-10 μM; 0-120 h; U2OS Bmal1-dLuc cells) reduces the half-life of CRY1 in a dose-dependent manner and causes circadian changes^[1].</p> <p>M47 (10 μM; 24-44 h; U2OS cells) decreases the level of CRY1 in U2OS cells^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Western Blot Analysis^[1]</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Cell Line:</td> <td>U2OS cells</td> </tr> <tr> <td>Concentration:</td> <td>10 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24-44 hours</td> </tr> <tr> <td>Result:</td> <td>Decreased CRY1 protein levels between 24 and 48 h.</td> </tr> </table>	Cell Line:	U2OS cells	Concentration:	10 μM	Incubation Time:	24-44 hours	Result:	Decreased CRY1 protein levels between 24 and 48 h.
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Concentration:	10 μM								
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Result:	Decreased CRY1 protein levels between 24 and 48 h.								
In Vivo	<p>M47 (5-1000 mg/kg; i.p.; daily, for 5 d; C57BL/6 J mice and p53 gene knockout C57BL/6 J mice) selectively reduces the half-life of CRY1 and is well tolerated with a good pharmacokinetic profile in vivo and enhances apoptosis^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>C57BL/6 J mice and p53 gene knockout C57BL/6 J mice^[1]</td> </tr> <tr> <td>Dosage:</td> <td>5, 50, 300 and 1000 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>intraperitoneal injection, daily, for 5 days</td> </tr> <tr> <td>Result:</td> <td>Prolonged the life span of p53 gene knockout mice.</td> </tr> </table>	Animal Model:	C57BL/6 J mice and p53 gene knockout C57BL/6 J mice ^[1]	Dosage:	5, 50, 300 and 1000 mg/kg	Administration:	intraperitoneal injection, daily, for 5 days	Result:	Prolonged the life span of p53 gene knockout mice.
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REFERENCES

[1]. Gul S, et, al. Discovery of a small molecule that selectively destabilizes Cryptochrome 1 and enhances life span in p53 knockout mice. Nat Commun. 2022 Nov 8;13(1):6742.

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

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