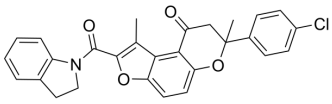
M47

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:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



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

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].

M47 (10 μM; 24-44 h; U2OS cells) decreases the level of CRY1 in U2OS cells[1].

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

Western Blot Analysis[1]

Cell Line:	U2OS cells
Concentration:	10 μM
Incubation Time:	24-44 hours
Result:	Decreased CRY1 protein levels between 24 and 48 h.

In Vivo

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].

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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.

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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