RIPK1-IN-11

Cat. No.: HY-144276

CAS No.: 2173557-02-1

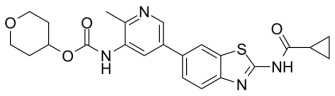
Molecular Formula: $C_{23}H_{24}N_4O_4S$

Molecular Weight: 452.53

Target: RIP kinase

Pathway: Apoptosis

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

RIPK1-IN-11 is a potent and orally active RIPK1 inhibitor (K_d=9.2 nM; IC_{50}=67 nM). RIPK1-IN-11 inhibits necroptosis in both human and mouse cells (EC_{50}=17-30 nM). Anti-inflammatory activity[1].

In Vitro

RIPK1-IN-11 (compound 70) (24 hours; for 1h prior to the treatment of TNFα) efficiently blocks necroptosis induced by TNFα in both human and mouse cells (EC_{50}=17-30 nM)[1].

Pharmacokinetic profiles of compound 70 in male SD rats

	IV (2 mg/kg)	PO (10 mg/kg)
T_{max} (h)		1.2
C_{max} (ng/mL)	1330	1241
AUC_{0-24} (ng/mL⊠h)	1208	3827
$t_{1/2}$ (ng/mL)	1.0	1.7
CL (mL/min/kg)	33	
Vd, ss (L/kg)	2.4	
F (%)		63%

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

In Vivo

RIPK1-IN-11 (3 mg/kg; i.p. for 30 min, followed by injection with TNFα) blocks hypothermia and death in mice in the TNFα-induced SIRS model[1].

RIPK1-IN-11 (5 mg/kg, 25 mg/kg; p.o.; 7 days; C57BL/6 mouse) exhibits no obvious toxicity in mice[1].

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

Animal Model:	C57BL/6 female mice (TNF-induced systemic inflammatory response syndrome)[1]
Dosage:	3 mg/kg
Administration:	i.p. for 30 min, followed by injection with TNFα (0.25 μg/g)
Result:	Significantly reduced TNFα-induced temperature loss and ameliorated lethal shock in mice.

REFERENCES

[1]. Li Z, Hao Y, Yang C, et al. Design, synthesis, and evaluation of potent RIPK1 inhibitors with in vivo anti-inflammatory activity. Eur J Med Chem. 2022;228:114036.

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