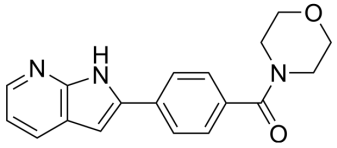
KWCN-41

Cat. No.:	HY-149258
CAS No.:	2913223-17-1
Molecular Formula:	$C_{18}H_{17}N_3O_2$
Molecular Weight:	307.35
Target:	RIP kinase; Necroptosis; Mixed Lineage Kinase
Pathway:	Apoptosis; MAPK/ERK Pathway
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (325.36 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2536 mL	16.2681 mL	32.5362 mL
	5 mM	0.6507 mL	3.2536 mL	6.5072 mL
	10 mM	0.3254 mL	1.6268 mL	3.2536 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

KWCN-41 is a selective and efficient inhibitor of RIPK1 kinase with an IC_{50} value of 88 nM. KWCN-41 specifically inhibits cell necrosis but does not inhibit apoptosis. KWCN-41 also has anti-inflammatory effects[1].

IC_{50} & Target

RIPK1
88 nM (IC_{50})

In Vitro

KWCN-41 (10, 50, 250 nM; 1 h) inhibits L929 cell necroptosis in a dosedependent manner and increases the number of cells in the viable cell zone[1].
KWCN-41 (10, 50, 250 nM; 0.5, 1.5, 2.5 h) inhibits the phosphorylation of RIPK1/3 and MLKL in L929 cells[1].
KWCN-41 (0-10 μM) inhibits TZ-induced necroptosis of L929 cells in a dose-dependent manner and similarly protects cells from TSZ (TNF-α, Smac mimetic, and z-VAD-FMK)-induced necroptosis of HT-29 and U937 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	L929 cells
Concentration:	10, 50, 250 nM
Incubation Time:	1 h
Result:	Inhibited L929 cell necroptosis in a Dosedependent manner and increased the number of cells in the viable cell zone.

In Vivo

KWCN-41 (10, 25, 40 mg/kg; i.p.; 72 h) dose-dependently inhibits TNF-α-induced death and improves survival in mice[1].

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

Animal Model:	Inflammatory mouse model[1]
Dosage:	10, 25, 40 mg/kg
Administration:	i.p.; dissolved in saline containing 10% DMSO and 20% Tween80; 72 h
Result:	At 25, 40 mg/kg completely inhibited TNF-α induced death in mice, achieving 100% survival compared to 75% survival at 10 mg/kg.

REFERENCES

[1]. Cui N, et al. Discovery of Sibiriline derivatives as novel receptor-interacting protein kinase 1 inhibitors. Eur J Med Chem. 2023 Mar 15;250:115190.

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