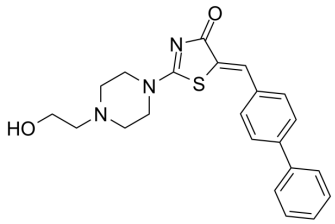
CLZ-8

Cat. No.:	HY-122627
CAS No.:	678158-55-9
Molecular Formula:	$C_{22}H_{23}N_3O_2S$
Molecular Weight:	393.5
Target:	Bcl-2 Family; Apoptosis
Pathway:	Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (127.06 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5413 mL	12.7065 mL	25.4130 mL
	5 mM	0.5083 mL	2.5413 mL	5.0826 mL
	10 mM	0.2541 mL	1.2706 mL	2.5413 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.83 mg/mL (2.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

CLZ-8 (Compound 8) is an orally active Mcl-1-PUMA interface inhibitor, with a K_i of 0.3 μM. CLZ-8 exhibits dual activity on reduce PUMA-dependent apoptosis while deactivating Mcl-1-mediated anti-apoptosis in cancer cells[1].

IC_{50} & Target		
	Mcl-1 0.3 μM (Ki)	PUMA

In Vitro

CLZ-8 (Compound 8) (0-160 μM, 48 h) significantly inhibits PUMA-dependent apoptosis[1].
CLZ-8 (0-1 μM, 2 h) significantly enhance the irradiated cell viability in a dose-dependent manner, provides significant protection for HUVECs, and inhibits overexpressed PUMA[2].
CLZ-8 (0-1 μM, 24 h) attenuates the radiation-induced apoptosis[2].
CLZ-8 (1 μM, 2 h) protects HUVECs from DNA breaks[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Apoptosis Analysis[1][2]

Cell Line:	DLD-1 cells or HUVEC cells
Concentration:	0-160 μM (DLD-1) or 0.01, 0.1 and 1 μM (HUVECs)
Incubation Time:	48 h (DLD-1) or 24 h (HUVECs)
Result:	Significantly inhibited PUMA-dependent apoptosis with an IC_{50} of 38.93 ± 0.91 μM. Attenuated the radiation-induced apoptosis.

Western Blot Analysis[2]

Cell Line:	HUVEC cells
Concentration:	0.001, 0.01, 0.1 and 1 μM
Incubation Time:	2 h
Result:	Suppressed induction of PUMA after radiation, significantly decreased the level of p53. Significantly decreased the level of MCL-1 and increased the level of Bcl-XL.

In Vivo

CLZ-8 (0-400 mg/kg; i.g.; once) shows powerful anti-radiation effects in mice[2].

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

Animal Model:	6-8 week-old male BALB/c mice[2]
Dosage:	100, 200 and 400 mg/kg
Administration:	Intragastric administration, once, 30 min prior to irradiation
Result:	Increased the survival rate of irradiated mice.

REFERENCES

[1]. Feng T, et al. CLZ-8, a potent small-molecular compound, protects radiation-induced damages both in vitro and in vivo. Environ Toxicol Pharmacol. 2018 Jul;61:44-51.

[2]. Liu J, et al. Targeting the apoptotic Mcl-1-PUMA interface with a dual-acting compound. Oncotarget. 2017 Apr 20;8(33):54236-54242.

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