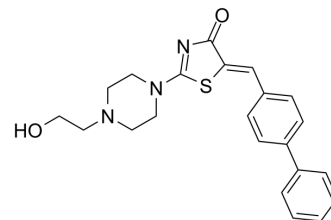


CLZ-8

Cat. No.:	HY-122627		
CAS No.:	678158-55-9		
Molecular Formula:	C ₂₂ H ₂₃ N ₃ O ₂ S		
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)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	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] .	
IC₅₀ & Target	Mcl-1 0.3 μM (K _i)	PUMA
In Vitro	<p>CLZ-8 (Compound 8) (0-160 μM, 48 h) significantly inhibits PUMA-dependent apoptosis^[1].</p> <p>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].</p> <p>CLZ-8 (0-1 μM, 24 h) attenuates the radiation-induced apoptosis^[2].</p> <p>CLZ-8 (1 μM, 2 h) protects HUVECs from DNA breaks^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>	

	Apoptosis Analysis ^{[1][2]}	
	Cell Line:	DLD-1 cells or HUVEC cells
	Concentration:	0-160 μ M (DLD-1) or 0.01, 0.1 and 1 μ M (HUVECs)
	Incubation Time:	48 h (DLD-1) or 24 h (HUVECs)
	Result:	Significantly inhibited PUMA-dependent apoptosis with an IC ₅₀ of 38.93 \pm 0.91 μ M. Attenuated the radiation-induced apoptosis.
	Western Blot Analysis ^[2]	
	Cell Line:	HUVEC cells
	Concentration:	0.001, 0.01, 0.1 and 1 μ M
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.

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

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