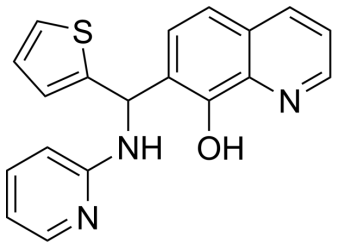
IMB-XH1

Cat. No.:	HY-12826
CAS No.:	292057-76-2
Molecular Formula:	$C_{19}H_{15}N_3OS$
Molecular Weight:	333.41
Target:	Bcl-2 Family; Bacterial; Beta-lactamase
Pathway:	Apoptosis; Anti-infection
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 : 33.33 mg/mL (99.97 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9993 mL	14.9966 mL	29.9931 mL
	5 mM	0.5999 mL	2.9993 mL	5.9986 mL
	10 mM	0.2999 mL	1.4997 mL	2.9993 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.08 mg/mL (6.24 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.24 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.24 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

IMB-XH1 is an inhibitor of myeloid cell factor 1 (Mcl-1)[1]. IMB-XH1 is a non-competitive Delhi metallo-β-lactamase (NDM-1) inhibitor. The IC_{50}s of IMB-XH1 against metallo-β-lactamases NDM-1, IMP-4, ImiS and L1 are 0.4637 μM, 3.980 μM, 0.2287 μM and 1.158 μM, respectively[2].

IC_{50} & Target

Mcl-1

In Vitro

IMB-XH1 (Compound 2) is a Mcl-1 inhibitor[1]. IMB-XH is screened out with the IC_{50} value of 0.4637 μM at the concentration of

20 μg/mL. IMB-XH1 (20 μg/mL) can increase the sensitivity of E. coli BL21 (DE3) (pET-30a(+)-NDM-1) to ampicillinby more than 8 times. IMB-XHI may have a broad spectrum of metallo-β-lactamases (MBLs) inhibitory activity. The combination of IMB-XH1 and Meropenem (MEM) may have potentials to treat infections caused by metallo-β-lactamases-positive, carbapenem-resistant Gram-negative pathogens[2].

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

REFERENCES

[1]. Richard DJ, et al. Hydroxyquinoline-derived compounds and analoguing of selective Mcl-1 inhibitors using a functional biomarker. Bioorg Med Chem. 2013 Nov 1;21(21):6642-9.

[2]. Jiangxue Han, et al. IMB-XH1 identified as a novel inhibitor of New Delhi metallo-β-lactamase-1.

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