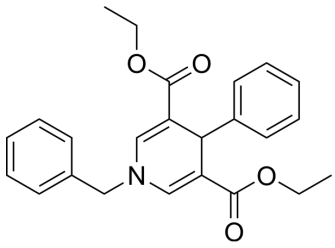
BML-278

Cat. No.:	HY-W025074
CAS No.:	120533-76-8
Molecular Formula:	$C_{24}H_{25}NO_4$
Molecular Weight:	391.46
Target:	Sirtuin; Histone Methyltransferase
Pathway:	Cell Cycle/DNA Damage; Epigenetics
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 : 10 mg/mL (25.55 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5545 mL	12.7727 mL	25.5454 mL
	5 mM	0.5109 mL	2.5545 mL	5.1091 mL
	10 mM	0.2555 mL	1.2773 mL	2.5545 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: ≥ 1 mg/mL (2.55 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BML-278 is a SIRT1 activator (EC_{150}: 1 μM). BML-278 increases H3K9 methylation and inhibits H3K9 acetylation in both the paternal and maternal pronucleus. BML-278 improves early embryonic development. BML-278 arrests the cell cycle at the G1/S phase, and reduces senescence in primary human mesenchymal cells. BML-278 reduces tubulin acetylation in U937 cells. BML-278 also increases mitochondrial density in murine C2C12 myoblasts[1][2].

IC_{50} & Target

SIRT1[1].

REFERENCES

[1]. Adamkova K, et al. SIRT1-dependent modulation of methylation and acetylation of histone H3 on lysine 9 (H3K9) in the zygotic pronuclei improves porcine embryo development. J Anim Sci Biotechnol. 2017 Nov 1;8:83.

[2]. Mai A, et al. Study of 1,4-dihydropyridine structural scaffold: discovery of novel sirtuin activators and inhibitors. J Med Chem. 2009 Sep 10;52(17):5496-504.

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