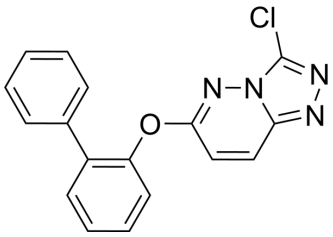
STL1267

Cat. No.:	HY-148711
CAS No.:	1429024-58-7
Molecular Formula:	$C_{17}H_{11}ClN_4O$
Molecular Weight:	322.75
Target:	REV-ERB
Pathway:	Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor
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 : 25 mg/mL (77.46 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.0984 mL	15.4919 mL	30.9837 mL
	5 mM	0.6197 mL	3.0984 mL	6.1967 mL
	10 mM	0.3098 mL	1.5492 mL	3.0984 mL

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

BIOLOGICAL ACTIVITY

Description

STL1267 is a potent and cross-the-blood-brain barrier REV-ERB agonist with a K_i value of 0.16 μM for REV-ERBα. STL1267 shows no cytotoxicity. STL1267 inhibits the gene expression of BMAL1[1].

IC_{50} & Target

K_i: 0.16 μM (REV-ERBα)[1]

In Vitro

STL1267 (5 μM; 24 h) decreases the expression of BMAL1 and increases the gene expression of Mtnd1, Mtco1, Vicad, Lcad, Scad, Lkb1, Sirt1, Nampt, Ppargc1a in HepG2 cells[1].

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

Cell Viability Assay[1]

Cell Line:	HepG2, C2C12 cells
Concentration:	0-20 μM
Incubation Time:	24 h

Result:	Showed no adverse effects on cell viability up to the maximum dose examined 20 μM.

RT-PCR[1]

Cell Line:	HepG2 cells
Concentration:	5 μM
Incubation Time:	24 h
Result:	Decreased the gene expression of BMAL1, increased the gene expression of Mtnd1, Mtco1, Vicad, Lcad, Scad, Lkb1, Sirt1, Nampt, Ppargc1a.

In Vivo

STL1267 (50 mg/kg; i.p.; once) inhibits Bmal1 expression in mouse[1].

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

Animal Model:	6-8 weeks, male C57Bl/6 J mice[1]
Dosage:	50 mg/kg
Administration:	I.p.; once
Result:	Showed a plasma half-life of 1.6 h, effectively suppressed BMAL1 expression in the liver at 12 h post-administration.

REFERENCES

[1]. Murray MH, et al. Structural basis of synthetic agonist activation of the nuclear receptor REV-ERB. Nat Commun. 2022 Nov 21;13(1):7131.

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