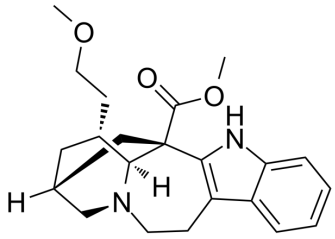
Zolunicant

Cat. No.:	HY-147428
CAS No.:	188125-42-0
Molecular Formula:	$C_{22}H_{28}N_2O_3$
Molecular Weight:	368.47
Target:	nAChR; Parasite
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Anti-infection
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	Zolunicant (MM-110) is a potent inhibitor against nicotinic α3β4 receptors with an IC_{50} of 0.90 μM to combat addiction. Zolunicant can decrease the self-administration of several addictive agents including morphine, methamphetamine, nicotine, and ethanol in rat model. Zolunicant can be studied as a potential research for multiple forms of agent abuse[1]. Zolunicant also reveals a potent leishmanicide effect against Leishmania amazonensis[2].
IC_{50} & Target	Leishmania
In Vitro	Zolunicant (18-MC; 0.01-100 μM) shows an inhibitory activity against nicotinic α3β4 receptors with an IC_{50} of 0.90 μM[1]. . Zolunicant (18-MCOR; 0-20 μg/ml; 24h) also shows antiamastigote activity against L. amazonensis-infected macrophage[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[2]

Cell Line:	L. amazonensis-infected macrophage
Concentration:	0, 1, 10,15 and 20 μg/ml
Incubation Time:	24 h
Result:	Decreased the amastigote survival by 73, 84, and 92%, respectively in the treatment with 18-MCOR at 1, 10, or 20 μg/ml.

In Vivo

Zolunicant (18-MC; Intravenous administration; 0-20 μg a day;14 days) decreases morphine self-administration by blocking α3β4 nicotinic receptors in the habenulo-interpeduncular pathway[3].

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Animal Model:	Naïve female Long-Evans derived rats[3]
Dosage:	0,10 and 20 μg
Administration:	Intravenous administration; once a day; 14 days
Result:	Infused into the medial habenula and interpeduncular nucleus decreased morphine self-

	administration (interpeduncular nucleus: $F(5,29) = 6.89$, $P < 0.0001$; medial habenula: $F(4,28) = 3.07$, $P < 0.03$).

REFERENCES

[1]. Pace CJ, et al. Novel iboga alkaloid congeners block nicotinic receptors and reduce drug self-administration. European journal of pharmacology. 2004;492(2-3):159-67.

[2]. Delorenzi JC, et al. In vitro activities of iboga alkaloid congeners coronaridine and 18-methoxycoronaridine against Leishmania amazonensis. Antimicrob Agents Chemother. 2002;46(7):2111-5.

[3]. Glick SD, et al. 18-Methoxycoronaridine acts in the medial habenula and/or interpeduncular nucleus to decrease morphine self-administration in rats. European journal of pharmacology. 2006;537(1-3):94-8.

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