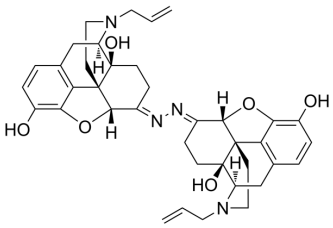
Naloxonazine

Cat. No.:	HY-137180
CAS No.:	82824-01-9
Molecular Formula:	$C_{38}H_{42}N_4O_6$
Molecular Weight:	650.76
Target:	Opioid Receptor; Parasite
Pathway:	GPCR/G Protein; Neuronal Signaling; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Naloxonazine is a potent and selective opiate mu-1 antagonist that can also affect leishmania by regulating host coding function[1].
IC_{50} & Target	Leishmania
In Vitro	Naloxonazine(0-50 μM, 24-72 h) shows inhibitory activity against the astigmatic phase of Leishmania donovani, and its maximum inhibitory concentration the GI_{50} value is 3.45 μM. The GI_{50} of THP-1 host cells is 34 μM[1]. Naloxonazine(10 μM, 4-72 h) inhibits the intracellular growth of the parasite by 70% after 24 h treatment and 95% after 72 h treatment[1]. Naloxonazine(10 μM, 4 or 24-72 h) leads to upregulation of vATPase subunits (ATP6V0C and TCIRG1) and actin (ACTB) genes and proteins, and affects the intracellular acid compartment of host cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Naloxonazine (0-15 mg/kg, i.p., 20 h) results that (olfactory discriminative stimulus)S+/CS+ correlated responses are significantly reduced by about 55% at a dose of 15 mg/kg, from 14.63 to 6.82. However, greater behavioral inhibition is observed in the (olfactory stimulus)S−/CS− stimulus condition, with a 66% reduction in response rate from 9.00 to 3.00 in male Wistar rats[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Géraldine De Muylder, et al. Naloxonazine, an Amastigote-Specific Compound, Affects Leishmania Parasites through Modulation of Host-Encoded Functions. PLoS Negl Trop Dis. 2016 Dec 30;10(12):e0005234.

[2]. Roberto Ciccocioppo, et al. Effect of selective blockade of mu(1) or delta opioid receptors on reinstatement of alcohol-seeking behavior by drug-associated stimuli in rats. Neuropsychopharmacology. 2002 Sep;27(3):391-9.

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

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