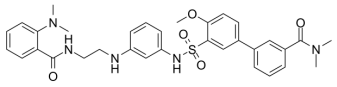
YNT-185

Cat. No.:	HY-136181A
CAS No.:	1804978-81-1
Molecular Formula:	$C_{33}H_{37}N_5O_5S$
Molecular Weight:	615.74
Target:	Orexin Receptor (OX Receptor)
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (162.41 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6241 mL	8.1203 mL	16.2406 mL
	5 mM	0.3248 mL	1.6241 mL	3.2481 mL
	10 mM	0.1624 mL	0.8120 mL	1.6241 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: ≥ 2.5 mg/mL (4.06 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

YNT-185 is a nonpeptide, selective orexin type-2 receptor (OX2R) agonist, with EC_{50}s of 0.028 and 2.75 μM for OX2R and OX1R, respectively. YNT-185 ameliorates narcolepsy-cataplexy symptoms in mouse models[1][2].

In Vivo

YNT-185 (20-40 mg/kg; i.p.) increases wakefulness in mice[2].
YNT-185 (300 nmol; i.c.v.) significantly increases wake time for 3 hours in a dose-dependent manner, accompanied by a decrease in NREM sleep time, in wild-type mice but not in OXRDKO mice[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male wild-type C57BL/6J mice[2]
Dosage:	20, 40 mg/kg
Administration:	I.p.

Result:	Wake time was also significantly increased.

REFERENCES

[1]. Nagahara T, et al. Design and Synthesis of Non-Peptide, Selective Orexin Receptor 2 Agonists. J Med Chem. 2015;58(20):7931-7937.

[2]. Irukayama-Tomobe Y, et al. Nonpeptide orexin type-2 receptor agonist ameliorates narcolepsy-cataplexy symptoms in mouse models. Proc Natl Acad Sci U S A. 2017;114(22):5731-5736.

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