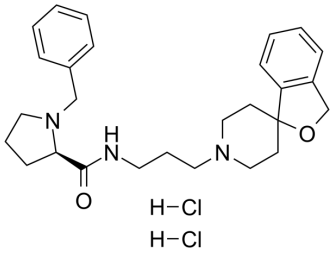
BAN ORL 24

Cat. No.:	HY-13222
CAS No.:	1401463-54-4
Molecular Formula:	$C_{27}H_{37}Cl_2N_3O_2$
Molecular Weight:	506.51
Target:	Opioid Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 200 mg/mL (394.86 mM; Need ultrasonic)
H_2O : 100 mg/mL (197.43 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.9743 mL	9.8715 mL	19.7429 mL
5 mM	0.3949 mL	1.9743 mL	3.9486 mL
10 mM	0.1974 mL	0.9871 mL	1.9743 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (197.43 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 5 mg/mL (9.87 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 5 mg/mL (9.87 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 5 mg/mL (9.87 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BAN ORL 24 is a nociceptin/orphanin FQ (N/OFQ) peptide receptor (NOP) antagonist. BAN ORL 24 has antagonistic effect for nociceptin (NOP) receptor with K_I value of 0.24 nM in CHO cell. BAN ORL 24 can be used for the research of cancer and analgesic[1].

IC_{50} & Target

Ki: 0.24 nM (NOP in CHO cell)[1].

	IC50: 50 μM (NOR); 0.224 μM (MOR)[2]
In Vitro	BAN ORL 24 has antagonist for NOR and MOR (opioid receptor subtype) with IC_{50} values of 50 μM and 0.224 μM, respectively [2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	BAN ORL 24 (10 mg/kg; i.v.) attenuates the duration of BPRIM97 thermal antinociception[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL/6 mice[3]
Dosage:	10 mg/kg
Administration:	10 mg/kg; i.v.
Result:	Caused inhibition of BPRIM97-induced antinociception at 90-min postinjection. Did not attenuate BPR1M97-induced antinociception in the tail-clip test after 30 min.

REFERENCES

[1]. Tao Hou, et al. Label-free cell phenotypic study of opioid receptors and discovery of novel mu opioid ligands from natural products. J Ethnopharmacol

[2]. Chao, et al. BPR1M97, a dual mu opioid receptor/nociceptin-orphanin FQ peptide receptor agonist, produces potent antinociceptive effects with safer properties than morphine. Neuropharmacology 166, 107678 (2020).

[3]. Fischetti et al (2009) Pharmacological characterization of the nociceptin/orphanin FQ receptor non peptide antagonist compound 24. Eur.J.Pharmacol. 614 50.

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