8-M-PDOT

Cat. No.: HY-101358

CAS No.: 134865-70-6

Molecular Formula: $C_{14}H_{19}NO_2$

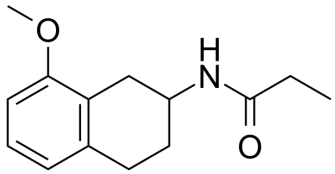
Molecular Weight: 233.31

Target: Melatonin Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (428.61 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.2861 mL	21.4307 mL	42.8614 mL
5 mM	0.8572 mL	4.2861 mL	8.5723 mL
10 mM	0.4286 mL	2.1431 mL	4.2861 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 7.5 mg/mL (32.15 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 7.5 mg/mL (32.15 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

8-M-PDOT (AH-002) is a selective melatonin MT2 receptor agonist. 8-M-PDOT is 5.2-fold selective for MT2 over MT1 receptors. 8-M-PDOT binds human recombinant MT2 and MT2 receptors with pKi values of 8.23 and 8.95 respectively. 8-M-PDOT has anxiolytic-like activity[1][2].

IC_{50} & Target

pKi: 8.23 (Melatonin MT2 receptor) and 8.95 (Melatonin MT1 receptor)[2]

In Vivo

8-M-PDOT (10 μg/μL; administrated into the dorsal striatum by bilateral cannulas; for 30 minutes; male Wistar rats) treatment shows anxiolytic-like effect[2].

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

Animal Model:	Male Wistar rats (280-320 g) with Rotenone[2]
Dosage:	10 μg/μL
Administration:	Administrated into the dorsal striatum by bilateral cannulas; for 30 minutes
Result:	Increased percentage of time spent in the open arms and in the number of open arms entries.

REFERENCES

[1]. Browning C, et al. Pharmacological characterization of human recombinant melatonin mt(1) and MT(2) receptors. Br J Pharmacol. 2000 Mar;129(5):877-86.

[2]. Noseda AC, et al. REM sleep deprivation promotes a dopaminergic influence in the striatal MT2 anxiolytic-like effects. Sleep Sci. 2016 Jan-Mar;9(1):47-54.

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