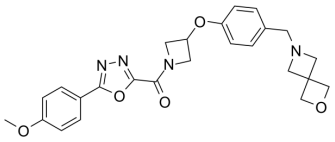
AZD1979

Cat. No.:	HY-U00257
CAS No.:	1254035-84-1
Molecular Formula:	$C_{25}H_{26}N_4O_5$
Molecular Weight:	462.5
Target:	MCHR1 (GPR24)
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (72.06 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.1622 mL	10.8108 mL	21.6216 mL
5 mM	0.4324 mL	2.1622 mL	4.3243 mL
10 mM	0.2162 mL	1.0811 mL	2.1622 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: ≥ 2.5 mg/mL (5.41 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.41 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.41 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

AZD1979 is a Melanin-concentrating hormone receptor 1 (MCHr1) antagonist with an IC_{50} of ~12 nM.

IC_{50} & Target

IC50: ~12 nM (MCHr1)[1]

In Vivo

In DIO mice, initial AZD1979-mediate body weight loss is driven by decreasing food intake, but an additional component of preserving energy expenditure is apparent in pair-feeding and indirect calorimetry studies. AZD1979 also dose-dependently reduces body weight in dogs[1].

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

PROTOCOL

Animal Administration [1]

Three weeks after the light-dark cycle have been reversed, all mice are sham dosed by p.o. gavage for 6 days to habituate the animals to the procedure, randomized into experimental groups base on average body weights and dosed p.o. with AZD1979 (20, 40 or 60 μmol/kg twice daily at 8:00 h and 15:00 h) or vehicle (0.5% HPMC, 0.1% Tween twice daily) for 21 days (n=6 per group). Three mice per group are then dosed once more with the respective doses of AZD1979 (20, 40 or 60 μmol/kg p.o.) and killed after 17 h by administration of an overdose of isoflurane (anaesthesia)[1].

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

REFERENCES

[1]. Ploj K, et al. Effects of a novel potent melanin-concentrating hormone receptor 1 antagonist, AZD1979, on body weight homeostasis in mice and dogs. Br J Pharmacol. 2016 Sep;173(18):2739-51.

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