SNAP 94847

Cat. No.: HY-107625

CAS No.: 487051-12-7

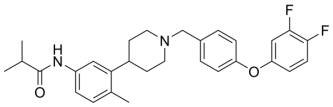
Molecular Formula: $C_{29}H_{32}F_2N_2O_2$

Molecular Weight: 478.57

Target: MCHR1 (GPR24)

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

SNAP 94847 is a novel, high affinity selective melanin-concentrating hormonereceptor1 (MCHR1) antagonist with (K_i= 2.2 nM, K_d=530 pM), it displays >80-fold and >500-fold selectivity over MCHα1A and MCHD2 receptors respectively. SNAP 94847 binds with high affinity to the mouse and rat MCHR1 with minimal cross-reactivity to other GPCR, ion channels, enzymes, and transporters[1][3].

IC_{50} & Target

Ki: 2.2 nM (MCHR1); Kd: 530 pM (MCHR1)[1]

In Vivo

SNAP 94847 (oral gavage; 20 mg/kg; 14 days) shows an exaggerated locomotor response to acute quinpirole [treatment: F(2,19)=11.31, treatment × time: F(34,323) = 4.061], the effect of SNAP 94847 on quinpirole-evoked ambulations over the entire observation period is significant compared to the untreated animals[2].

SNAP 94847 (oral administration; 20 mg/kg; 21 days) in drink water, produces a significant increase in ambulation relative to untreated animals [treatment: F(3,28) = 8.971; treatment × time: F(51,476)=11.50]. shows a marked increase in locomotion is apparent after 40 min in the SNAP 94847-treated group,this effect is significant over 180 min[2].

SNAP 94847 (oral administration; 10 mg/kg), has a good bioavailability (59%), low plasma and blood clearances of 4.2 L/hr/kg and 3.3 L/hr/kg, respectively, and the half-life was shown to be 5.2 h in rats in a PK study[3].

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

Animal Model:	Rat[2]
Dosage:	20 mg/kg
Administration:	Oral administration; 20 mg/kg; 14 days
Result:	Exhibited a exaggerated locomotor response to acute quinpirole.

Animal Model:	Rat (PK study)[3]
Dosage:	10 mg/kg
Administration:	oral gavage; 10 mg/kg
Result:	Exhibited good physicochemical properties in rats.

CUSTOMER VALIDATION

- Research Square Preprint. 2021 Sep.

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REFERENCES

[1]. David DJ, et al. Efficacy of the MCHR1 antagonist N-[3-(1-{[4-(3,4-difluorophenoxy)phenyl]methyl}(4-piperidyl))-4-methylphenyl]-2-methylpropanamide (SNAP 94847) in mouse models of anxiety and depression following acute and chronic administration is independent of hippocampal neurogenesis. J Pharmacol Exp Ther. 2007 Apr;321(1):237-48. Epub 2007 Jan 19.

[2]. Nair SG, et al. Effects of the MCH1 receptor antagonist SNAP 94847 on high-fat food-reinforced operant responding and reinstatement of food seeking in rats.Psychopharmacology (Berl). 2009 Jul;205(1):129-40.

[3]. Chen CA, et al. Synthesis and SAR investigations for novel melanin-concentrating hormone 1 receptor (MCH1) antagonists part 2: A hybrid strategy combining key fragments of HTS hits.J Med Chem. 2007 Aug 9;50(16):3883-90.

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