SNT-207707

Cat. No.: HY-11029

CAS No.: 1064662-40-3

Molecular Formula: $C_{32}H_{44}ClN_5O$

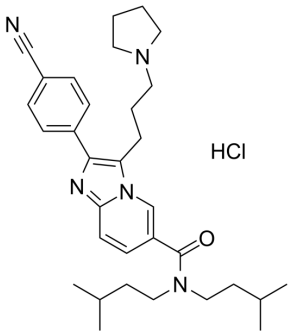
Molecular Weight: 550.18

Target: Melanocortin Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 250 mg/mL (454.40 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.8176 mL	9.0879 mL	18.1759 mL
5 mM	0.3635 mL	1.8176 mL	3.6352 mL
10 mM	0.1818 mL	0.9088 mL	1.8176 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: ≥ 2.08 mg/mL (3.78 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (3.78 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.78 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SNT-207707 is a selective, potent and orally active melanocortin MC-4 receptor antagonist with an IC_{50} of 8 nM (binding) and 5 nM (function) on the MC-4 receptor.

IC_{50} & Target

IC50: 8 nM (binding MC-4), 5 nM (function MC-4)[1]

In Vitro

SNT-207707 binds to the MC-4 receptor with an affinity of 8 nM and shows a more than 200-fold selectivity vs. MC-3 and MC-5. SNT207858 is a 22 nM MC-4 antagonist with a 170-fold selectivity vs. MC-3 and a 40-fold selectivity versus MC-5[1].

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

In Vivo	Single subcutaneous injection of 20 mg/kg of SNT-207707 distinctly increases food intake of the mice. Once daily oral administration of both compounds SNT207858 and SNT-207707 starting the day after tumor implantation significantly reduces the tumor induced weight loss[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	Mice[1] Twelve weeks old male CD-1 mice are dosed by gavage with either SNT-207707 or SNT207858 at 60 mg/kg (n=9 per compound). At 1, 3, and 6 hrs post-dose, 3 mice from each compound group are euthanized with CO^2. Blood is collected by cardiac puncture, plasma is isolated immediately and then kept on dry ice until analysis[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Weyermann P, et al. Orally available selective melanocortin-4 receptor antagonists stimulate food intake and reduce cancer-induced cachexia in mice. PLoS One. 2009;4(3):e4774.

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