BIBO3304 TFA

Cat. No.: HY-107725

CAS No.: 191868-14-1

Molecular Formula: $C_{31}H_{36}F_3N_7O_5$

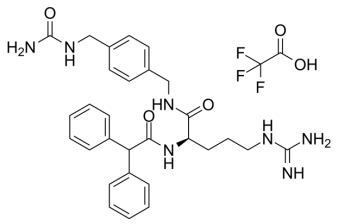
Molecular Weight: 643.66

Target: Neuropeptide Y Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: -20°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 : 100 mg/mL (155.36 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	1.5536 mL	7.7681 mL	15.5362 mL
	5 mM	0.3107 mL	1.5536 mL	3.1072 mL
	10 mM	0.1554 mL	0.7768 mL	1.5536 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 (3.88 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.88 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.88 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BIBO3304 TFA is a potent, orally active, and selective neuropeptide Y (NPY) Y1 receptor antagonist, with subnanomolar affinity for both the human and the rat Y1 receptor (IC_{50}=0.38 and 0.72 nM, respectively)[1].

In Vivo

BIBO3304 TFA (30 μg; bilateral paraventricular nucleus injection) attenuates the hyperphagia following fasting[1].
BIBO3304 TFA (15-60 μg) dose-dependently inhibits the feeding reponse mediated by 1 μg NPY[1].
BIBO3304 TFA (0.5 μM; p.o.) significantly increases serum insulin levels[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Adult male Chbb:Thom rats weighing between 300 and 340 g[1]
Dosage:	30 μg
Administration:	bilateral paraventricular nucleus injection
Result:	Attenuated the hyperphagia following fasting, especially during the first 2 h of refeeding.

Animal Model:	7-week-old C57BL/6JAusb mice[2]
Dosage:	0.5 μM
Administration:	p.o.
Result:	Significantly increased serum insulin levels.

REFERENCES

[1]. Wieland HA, et al. Subtype selectivity of the novel nonpeptide neuropeptide Y Y1 receptor antagonist BIBO 3304 and its effect on feeding in rodents. Br J Pharmacol. 1998 Oct;125(3):549-55.

[2]. Loh K, et al. Inhibition of Y1 receptor signaling improves islet transplant outcome. Nat Commun. 2017 Sep 8;8(1):490.

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