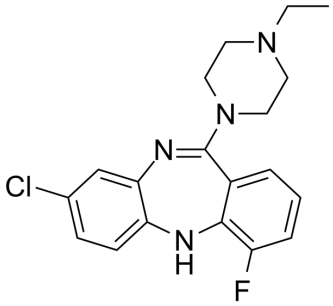
JHU37160

Cat. No.:	HY-131881
CAS No.:	2369979-68-8
Molecular Formula:	$C_{19}H_{20}ClFN_4$
Molecular Weight:	358.84
Target:	mAChR
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 : 50 mg/mL (139.34 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7868 mL	13.9338 mL	27.8676 mL
	5 mM	0.5574 mL	2.7868 mL	5.5735 mL
	10 mM	0.2787 mL	1.3934 mL	2.7868 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 (6.97 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.97 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.97 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

JHU37160 is a potent and brain-penetrant DREADD agonist, with EC_{50}s of 18.5 nM and 0.2 nM for hM3Dq and hM4Di DREADDs in HEK-293 cells, respectively. JHU37160 exhibits selective [^{3}H]Clozapine displacement from DREADDs and not from other Clozapine-binding sites in mice brain tissue[1].

IC_{50} & Target

EC50: 18.5 nM (hM3Dq DREADD); 0.2 nM (hM4Di DREADD)[1]

In Vitro

JHU37160 displays high DREADD affinity, with K_is of 1.9 nM and 3.6 nM for hM3Dq and hM4Di expressed in mouse brain

	sections[1]. JHU37160 (1-1000 nM) selectively displaces [^{3}H]Clozapine displacement from DREADDs and not from other Clozapine-binding sites[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	JHU37160 (0.1 mg/kg; i.p.) exhibits high DREADD occupancy in mice and rats[1]. JHU37160 (0.01-1 mg/kg; i.p.) selectively inhibits locomotor activity in D1-hM3Dq and D1-hM4Di mice without any significant locomotor effects observed in WT mice[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Bonaventura J, et, al. High-potency ligands for DREADD imaging and activation in rodents and monkeys. Nat Commun. 2019 Oct 11;10(1):4627.

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