NP118809

Cat. No.: HY-14462

CAS No.: 41332-24-5

Molecular Formula: $C_{32}H_{32}N_2O$

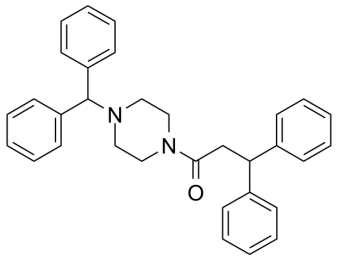
Molecular Weight: 460.61

Target: Calcium Channel

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (108.55 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.1710 mL	10.8552 mL	21.7103 mL
5 mM	0.4342 mL	2.1710 mL	4.3421 mL
10 mM	0.2171 mL	1.0855 mL	2.1710 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 (5.43 mM); Suspended solution; Need ultrasonic and warming
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.43 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.43 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

NP118809 is a potent N-type calcium channel blocker, with an IC_{50} of 0.11 μM; also less potently inhibits L-type calcium channel with an IC_{50} of 12.2 μM.

IC_{50} & Target

N-type calcium channel	L-type calcium channel
0.11 μM (IC_{50})	12.2 μM (IC_{50})

In Vitro

NP118809 is a potent N-type calcium channel blocker, with an IC_{50} of 0.11 μM; also inhibits L-type calcium channel with an

	IC_{50} of 12.2 μM. NP118809 inhibits the hERG potassium channel in HEK cells, with an IC_{50} of 7.4 μM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	NP118809 (25 mg/kg, i.p.) shows significant analgesic activity in the phase IIA portions of the rat formalin model[1]. NP118809 (30 mg/kg, p.o.) results in 80.3% inhibition of mechanical allodynia and 96.3% inhibition of thermal hyperalgesia in the rat spinal nerve ligation model[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Zamponi GW, et al. Scaffold-based design and synthesis of potent N-type calcium channel blockers. Bioorg Med Chem Lett. 2009 Nov 15;19(22):6467-72.

[2]. Pajouhesh H, et al. Structure-activity relationships of diphenylpiperazine N-type calcium channel inhibitors. Bioorg Med Chem Lett. 2010 Feb 15;20(4):1378-83.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA