Pivagabine

Cat. No.: HY-108295

CAS No.: 69542-93-4

Molecular Formula: $C_9H_{17}NO_3$

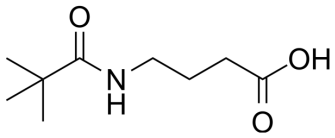
Molecular Weight: 187.24

Target: GABA Receptor

Pathway: Membrane Transporter/Ion Channel; 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 (267.04 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	5.3407 mL	26.7037 mL	53.4074 mL
	5 mM	1.0681 mL	5.3407 mL	10.6815 mL
	10 mM	0.5341 mL	2.6704 mL	5.3407 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 (13.35 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (13.35 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (13.35 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Pivagabine (CXB 722) is a hydrophobic 4-aminobutyric acid derivative with neuromodulatory activity. Pivagabine penetrates the blood-brain barrier in rats. Pivagabine antagonizes the effects of foot shock on both GABAA receptor function and corticotropin-releasing factor (CRF) concentrations in rat brain[1][2].

In Vivo

Pivagabine (CXB 722) (200 mg/kg; i.p.; twice a day for 4 days and 1 hour before killing on the 5th day) prevents the effects of foot-shock stress on CRF concentration in both brain regions[2].

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

Animal Model:	Adult male Sprague-Dawley CD rats (200-250 g)[2]
Dosage:	200 mg/kg
Administration:	i.p.; twice a day for 4 days and 1 hour before killing on the 5th day
Result:	Prevented the effects of foot-shock stress on CRF concentration in both brain regions. Reduced by 52% the CRF concentration in the hypothalamus but had no effect on that in the cerebral cortex.

REFERENCES

[1]. Esposito G, et al. Pivagabine: a novel psychoactive drug. Arzneimittelforschung. 1997 Nov;47(11A):1306-9.

[2]. Serra M, et al. Antagonism by pivagabine of stress-induced changes in GABAA receptor function and corticotropin-releasing factor concentrations in rat brain. Psychoneuroendocrinology. 1999 Apr;24(3):269-84.

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