Picamilon

Cat. No.: HY-107482

CAS No.: 34562-97-5

Molecular Formula: $C_{10}H_{12}N_2O_3$

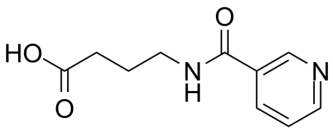
Molecular Weight: 208.21

Target: GABA Receptor

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (300.18 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.8028 mL	24.0142 mL	48.0284 mL
	5 mM	0.9606 mL	4.8028 mL	9.6057 mL
	10 mM	0.4803 mL	2.4014 mL	4.8028 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Picamilon is an orally active derivative of γ-aminobutyric acid that has nootropic effect. Picamilon improves the epilepsy model in rats and promotes correction of functional disorders of the pancreas during Alloxan (HY-W017227)-induced diabetes mellitus in rats[1][2][3].

In Vivo

Picamilon (PM) (20 or 50 mg/kg; i.p.) significantly decreases the frequency and duration of seizure spike-wave discharges (SWDs) in Picrotoxin (HY-101391)-induced convulsive activity in rats[2].

Picamilon (250 mg/kg; p.o.) inhibits NLRP3 inflammasome activation in pancreatic cells during Alloxan (HY-W017227) -induced diabetes mellitus rats model[3].

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

Animal Model:	Picrotoxin (HY-101391)-induced epilepsy model in rats [2]
Dosage:	20 or 50 mg/kg
Administration:	Intraperitoneal injection (i.p.)

Result:	Significantly decreased the frequency and duration of seizure spike-wave discharges (SWDs) in doses of 50 mg/kg. Decreased the intensity of SWDs in smaller doses (20 mg/kg).

Animal Model:	Alloxan (HY-W017227)-induced diabetes mellitus model in rats [3]
Dosage:	250 mg/ kg
Administration:	Oral gavage (p.o.)
Result:	Suppressed NLRP3 activity, as indicated by a significant decrease in the area of immunopositive pancreatocytes to (21,30 ± 5,44) and (39,31 ± 5,24) %, respectively, relative to the value in the group of animals that were not treated (75,19±7,69%). Promoted correction of functional disorders of the pancreas during alloxan-induced diabetes mellitus by inhibiting activation of NLRP3 inflammasome in pancreatocytes.

REFERENCES

[1]. Mirzoian RS, et al. Vliianie pikamilona na krovosnabzhenie kory i mikrotsirkuliatsiiu v sisteme pial'nykh arteriol [Effect of pikamilon on the cortical blood supply and microcirculation in the pial arteriole system]. Biull Eksp Biol Med. 1989 May;107(5):581-2. Russian.

[2]. Denisenko, et al. Effects of Picamilon and Isopicamilon on the Formation of Picrotoxin-Induced Convulsive Activity in Rats. Neurophysiology 46, 284–287 (2014).

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