Cinromide

Cat. No.: HY-B1274

CAS No.: 58473-74-8

Molecular Formula: $C_{11}H_{12}BrNO$

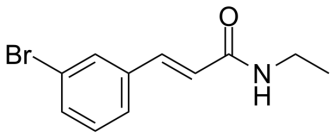
Molecular Weight: 254.12

Target: Others

Pathway: Others

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 : 250 mg/mL (983.79 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.9351 mL	19.6757 mL	39.3515 mL
	5 mM	0.7870 mL	3.9351 mL	7.8703 mL
	10 mM	0.3935 mL	1.9676 mL	3.9351 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: ≥ 2.08 mg/mL (8.19 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (8.19 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (8.19 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Cinromide is an anticonvulsant agent. Cinromide inhibits epithelial neutral amino acid transporter B^0AT1 (SLC6A19) with an IC_{50} of 0.5 μM[1][2].

In Vitro

Cinromide (10-100 μM) inhibits 5-HT-induced contractions in rat fundus strips by 46%. Cinromide (100 μM) inhibits monoamine oxidase prepared from both liver and brain of rats[3].

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

In Vivo	Cinromide shows electroshock convulsion and leptazol(pentetrazo1)-induced convulsion in mice, with ED_{50}s of 60 ± 11 mg/kg, 90 ± 15 mg/kg and 80 ± 15 mg/kg, 300 ± 61 mg/kg for i.p. and oral administrion, respectively. Cinromide produces a dose-related antileptazol activity with an ED_{50} value of 58 ± 11 mg/kg by i.p. administration in rats. Furthermore, Cinromide (75 mg/kg) significantly elevates the amount of leptazol needed to induce clonic seizures in the intravenously infused leptazol-threshold test in rats. Cinromide (300 mg/kg, i.p) shows no sifnificant effect on the anaesthetized open-chested dogs after 4 h treatment, neither in conscious dogs after 5-h oral treatment with 300 and 600 mg/kg of Cinromide[1]. Cinromide (40 mg/kg, i.v.) depresses the response of the neuron to the unconditioned maxillary nerve stimulus, increasing the latency and decreasing the number of spikes, and depresses the response of the neuron to the unconditioned maxillary nerve stimulus, increasing the latency and decreasing the number of spikes. Cinromide (20, 40, 80 mg/kg, i.v.) increases the latency of the unconditioned response and segmental inhibition dose-dependently. Cinromide decreases periventricular inhibition and EEG[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [2]	Cinromide is dissolved in propylene glycol to produce a solution containing 50 mg/mL. It is slowly injected into the femoral vein over a 3-min period. Only one neuron in each cat is studied. To evaluate the dose-response relationship, the drug is given in three cumulative doses. The interval between drug injections is 15 min. Blood samples for drug level measurement are taken 10 min after each injection. Plasma levels of cinromide and its metabolites are determined by high-performance liquid chromotography[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Front Pharmacol. 2022 Feb 23;13:816133.
- Front Pharmacol. 23 February 2022.

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REFERENCES

[1]. Chiu P, et al. The effect of cinromide on "kindled" seizures in the rat. Neuropharmacology. 1982;21(3):273-276.

[2]. Yadav A, et al. Novel Chemical Scaffolds to Inhibit the Neutral Amino Acid Transporter B0AT1 (SLC6A19), a Potential Target to Treat Metabolic Diseases. Front Pharmacol. 2020;11:140. Published 2020 Feb 28.

[3]. Soroko FE, et al. Cinromide (3-bromo-N-ethylcinnanamide), novel anticonvulsant agent. J Pharm Pharmacol. 1981 Nov;33(11):741-3.

[4]. Fromm GH, et al. Effect of cinromide on inhibitory and excitatory mechanisms. Epilepsia. 1983 Aug;24(4):394-400.

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