Apovincaminic acid hydrochloride salt

Cat. No.: HY-133813A

CAS No.: 72296-47-0

Molecular Formula: $C_{20}H_{23}ClN_2O_2$

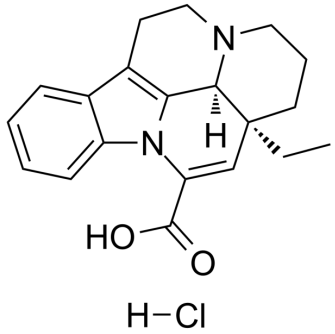
Molecular Weight: 358.86

Target: Drug Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (139.33 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7866 mL	13.9330 mL	27.8660 mL
	5 mM	0.5573 mL	2.7866 mL	5.5732 mL
	10 mM	0.2787 mL	1.3933 mL	2.7866 mL

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

BIOLOGICAL ACTIVITY

Description

Apovincaminic acid hydrochloride salt is an orally active and brain-penetrant main active metabolite of Vinpocetine (VP). Apovincaminic acid hydrochloride salt exerts a neuroprotective type of action[1][2].

In Vivo

Apovincaminic acid (10 mg/kg; i.p. twice daily for 4 days) effectively attenuates the behavioral deficits, and significantly decreases lesion size and the region of microglia activation[1].

Apovincaminic acid (10 mg/kg; p.o.) is absorbed 50% of the dose comparing with i.v. administration in rats[2].

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

Animal Model:	Male Harlan□Wistar rats (300-400 g) are injected NMDA[1]
Dosage:	10 mg/kg
Administration:	I.p. twice daily for 4 days
Result:	Attenuated the attention deficit effectively. Prevented the learning and memory impairment in the spontaneous alternation and

	Morris water maze tests. significantly reduced lesion size microglia activation.

REFERENCES

[1]. Nyakas C, et, al. Neuroprotective effects of vinpocetine and its major metabolite cis-apovincaminic acid on NMDA-induced neurotoxicity in a rat entorhinal cortex lesion model. CNS Neurosci Ther. Summer 2009;15(2):89-99.

[2]. Pudleiner P, et, al. Study on the absorption of vinpocetine and apovincaminic acid. Eur J Drug Metab Pharmacokinet. Oct-Dec 1993;18(4):317-21.

[3]. Wang M, et, al. Simultaneous Determination of Vinpocetine and its Major Active Metabolite Apovincaminic Acid in Rats by UPLC-MS/MS and its Application to the Brain Tissue Distribution Study. J Chromatogr Sci. 2018 Mar 1;56(3):225-232.

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