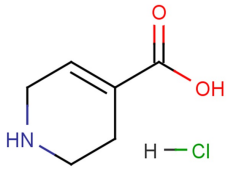
Data Sheet (Cat.No.T11684)

TargetMol
A DRUG SCREENING EXPERT

Isoguvacine hydrochloride

Chemical Properties



CAS No.:	68547-97-7
Formula:	C6H10ClNO2
Molecular Weight:	163.6
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Isoguvacine hydrochloride is a GABA receptor agonist.
Targets(IC_{50})	GABA: None
In vitro	Isoguvacine binds to membrane preparations of rat forebrain with pharmacological characteristics similar to the postsynaptic GABA recognition site: that it is transported into synaptosomal preparations by an uptake system similar to the high-affinity GABA uptake system; and that recently accumulated isoguvacine is released in a Ca2+-dependent manner and by heteroexchange with external GABA. Isoguvacine at a concentration of 50 μM blocks the seizure like events in 2 out of 6 organotypic hippocampal slice cultures. Isoguvacine inhibits the low magnesium induced seizure like events dose dependently.Isoguvacine binds to a mouse forebrain synaptic membrane preparation. The specific binding is displaceable by GABA, muscimol and bicuculline but not by picrotoxin or diaminobutyric acid. Kinetic data suggest two binding affinities. Highest levels of binding are observed in the cerebellum, cortex and hippocampus.

Solubility Information

Solubility	DMSO: 25 mg/mL (152.81 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.112 mL	30.562 mL	61.125 mL
5 mM	1.222 mL	6.112 mL	12.225 mL
10 mM	0.611 mL	3.056 mL	6.112 mL
50 mM	0.122 mL	0.611 mL	1.222 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Morin AM, et al. The binding of 3H-isoguvacine to mouse brain synapticmembranes. Life Sci. 1980 Apr 14;26(15):1239-45.
2. White WF, et al. Isoguvacine binding, uptake, and release: relation to the GABA system. J Neurochem. 1983 Jun;40(6):1701-8.
3. Wahab A, et al. Effects of gamma-aminobutyric acid (GABA) agonists and a GABA uptake inhibitor on pharmacoresistant seizure like events in organotypic hippocampal slice cultures. Epilepsy Res. 2009 Oct;86(2-3):113-23.

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