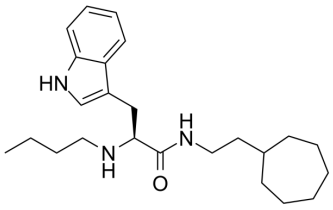
BChE-IN-4

Cat. No.:	HY-143464
CAS No.:	2304818-41-3
Molecular Formula:	$C_{24}H_{37}N_3O$
Molecular Weight:	383.57
Target:	AChE
Pathway:	Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

BChE-IN-4 is a potent and cross the blood-brain barrier BChE inhibitor. BChE-IN-4 attenuates learning and memory deficits caused by cholinergic deficit in mouse model. BChE-IN-4 has the potential for the research of alzheimer's disease[1].

IC_{50} & Target

BChE[1]

In Vivo

BChE-IN-4 (compound 1) (10, 20, 30 mg/kg) attenuates learning and memory deficits caused by cholinergic deficit in AD mouse model[1].

BChE-IN-4 (30 mg/kg) dose not induce adverse motor effects in vivo[1].

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

Animal Model:	Adult male Albino Swiss CD-1 mice (Scopolamine-induced memory-impaired CD-1 mice)[1]
Dosage:	10, 20, 30 mg/kg
Administration:	I.p.
Result:	Significantly prolonged the step-through latencies in memory impaired mice.

Animal Model:	18-22 g, C57BL/6J mice[1]
Dosage:	30 mg/kg
Administration:	I.p.
Result:	Did not enhance learning abilities and working memory in the acquisition phase or the short-term memory retrieval on day 5, but did significantly improve long-term memory retrieval, as observed on day 12 of the BM (Barnes maze) task.

Animal Model:	Mice[1]
Dosage:	30 mg/kg (suspended in 1% Tween 80)

Administration:	I.p
Result:	Neither altered the number of light-beam interruptions in the locomotor activity test nor induced any motor deficits at 6, 18 and 24 rpm in the rotarod test.

REFERENCES

[1]. Meden A, et al. Structure-activity relationship study of tryptophan-based butyrylcholinesterase inhibitors. Eur J Med Chem. 2020 Dec 15;208:112766.

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