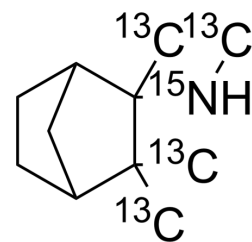


Mecamylamine hydrochloride-¹³C₄,¹⁵N

Cat. No.:	HY-B1395S1
Molecular Formula:	C ₇ ¹³ C ₄ H ₁₀ Cl ¹⁵ N
Molecular Weight:	196.62
Target:	nAChR; Isotope-Labeled Compounds
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



H-Cl

BIOLOGICAL ACTIVITY

Description	Mecamylamine (hydrochloride)- ¹³ C ₄ , ¹⁵ N is the ¹³ C-labeled and ¹⁵ N-labeled Mecamylamine hydrochloride. Mecamylamine hydrochloride is an orally active, nonselective, noncompetitive nAChR antagonist that can treat various neuropsychiatric disorders. Mecamylamine hydrochloride is originally used as a ganglionic blocker in treating hypertension. Mecamylamine hydrochloride can easily cross the blood-brain barrier[1][2].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Bacher I, et al. Mecamylamine - a nicotinic acetylcholine receptor antagonist with potential for the treatment of neuropsychiatric disorders. *Expert Opin Pharmacother.* 2009 Nov;10(16):2709-21.
- [3]. Ostroumov K, et al. Modeling study of mecamylamine block of muscle type acetylcholine receptors. *Eur Biophys J.* 2008 Apr;37(4):393-402.
- [4]. Rabenstein RL, et al. The nicotinic antagonist mecamylamine has antidepressant-like effects in wild-type but not beta2- or alpha7-nicotinic acetylcholine receptor subunit knockout mice. *Psychopharmacology (Berl).* 2006 Dec;189(3):395-401.

Caution: Product has not been fully validated for medical applications. For research use only.

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