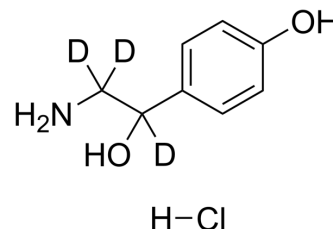


Octopamine-d₄ hydrochloride

Cat. No.:	HY-B0528AS
CAS No.:	1219803-62-9
Molecular Formula:	C ₈ H ₉ D ₃ ClNO ₂
Molecular Weight:	192.66
Target:	Adrenergic Receptor; Endogenous Metabolite
Pathway:	GPCR/G Protein; Neuronal Signaling; 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 : ≥ 100 mg/mL (519.05 mM)
 H₂O : ≥ 50 mg/mL (259.52 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
	1 mM		5.1905 mL	25.9525 mL	51.9049 mL
	5 mM		1.0381 mL	5.1905 mL	10.3810 mL
	10 mM		0.5190 mL	2.5952 mL	5.1905 mL

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

BIOLOGICAL ACTIVITY

Description

Octopamine-d₄ (hydrochloride) is the deuterium labeled Octopamine hydrochloride. Octopamine ((±)-p-Octopamine) hydrochloride, a biogenic monoamine structurally related to noradrenaline, acts as a neurohormone, a neuromodulator and a neurotransmitter in invertebrates. Octopamine hydrochloride can stimulate alpha2-adrenoceptors (ARs) in Chinese hamster ovary cells transfected with human alpha2-ARs. Octopamine hydrochloride increased glycogenolysis, glycolysis, oxygen uptake, gluconeogenesis and the portal perfusion pressure^{[1][2][3]}.

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

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- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Farooqui T. Octopamine-mediated neuromodulation of insect senses. *Neurochem Res.* 2007;32(9):1511-1529.
- [3]. Roeder T. Octopamine in invertebrates. *Prog Neurobiol.* 1999;59(5):533-561.
- [4]. Axelrod J, et al. Octopamine. *Nature.* 1977;265(5594):501-504.
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA