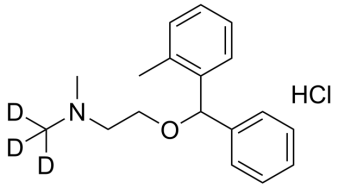
Orphenadrine-d3 hydrochloride

Cat. No.:	HY-B1126S
CAS No.:	1309283-23-5
Molecular Formula:	$C_{18}H_{21}D_3ClNO$
Molecular Weight:	308.86
Target:	iGluR
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Orphenadrine-d_3 (hydrochloride) is the deuterium labeled Orphenadrine hydrochloride[1]. Orphenadrine hydrochloride is an orally active and non-competitive NMDA receptor antagonist (crosses the blood-brain barrier) with a Ki of 6.0 μM. Orphenadrine hydrochloride relieves stiffness, pain and discomfort due to muscle strains, sprains or other injuries. Orphenadrine hydrochloride is also used to relieve tremors associated with parkinson's disease. Orphenadrine citrate has good neuroprotective properties, can be used in studies of neurodegenerative diseases[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

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.

[2]. Pubill D, et al. Orphenadrine prevents 3-nitropropionic acid-induced neurotoxicity in vitro and in vivo. Br J Pharmacol. 2001 Feb;132(3):693-702.

[3]. Kornhuber J, et al. Orphenadrine is an uncompetitive N-methyl-D-aspartate (NMDA) receptor antagonist: binding and patch clamp studies. J Neural Transm Gen Sect. 1995102(3):237-46.

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