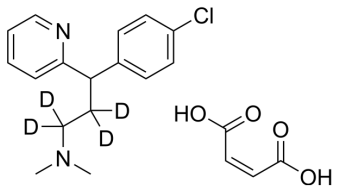
Chlorpheniramine-d_4 maleate

Cat. No.:	HY-B0286AS
CAS No.:	2747915-71-3
Molecular Formula:	$C_{20}H_{19}D_4ClN_2O_4$
Molecular Weight:	394.89
Target:	Histamine Receptor; Isotope-Labeled Compounds
Pathway:	GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Chlorpheniramine-d_4 (maleate) is deuterium labeled Chlorpheniramine (maleate).
IC_{50} & Target	H_1 Receptor
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]. Iemura, R., et al., Synthesis of 2-(4-substituted-1-piperazinyl)benzimidazoles as H1-antihistaminic agents. J Med Chem, 1986. 29(7): p. 1178-83.

[3]. Kelly, J.X., et al., Design, synthesis, and evaluation of 10-N-substituted acridones as novel chemosensitizers in Plasmodium falciparum. Antimicrob Agents Chemother, 2007. 51(11): p. 4133-40.

[4]. Medina, M.A., et al., Chlorpheniramine inhibits the synthesis of ornithine decarboxylase and the proliferation of human breast cancer cell lines. Breast Cancer Res Treat, 1995. 35(2): p. 187-94.

[5]. Takano, N., I. Arai, and M. Kurachi, Analysis of the spontaneous scratching behavior by NC/Nga mice: a possible approach to evaluate antipruritics for subjects with atopic dermatitis. Eur J Pharmacol, 2003. 471(3): p. 223-8.

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