Salmeterol-d_3 xinafoate

Cat. No.: HY-17453S

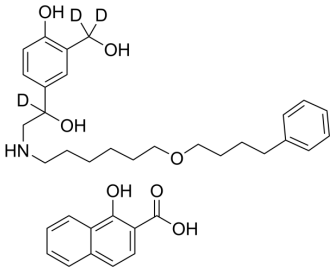
Molecular Formula: $C_{36}H_{42}D_3NO_7$

Molecular Weight: 606.76

Target: Adrenergic Receptor; Isotope-Labeled Compounds

Pathway: GPCR/G Protein; Neuronal Signaling; Others

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Salmeterol-d_3 (xinafoate) is the deuterium labeled Salmeterol xinafoate. Salmeterol (GR 33343X) xinafoate is a potent and selective human β2 adrenoceptor agonist. Salmeterol shows potent stimulation of cAMP accumulation in CHO cells expressing human β2, β1 and β3 adrenoceptors with pEC50s of 9.6, 6.1, and 5.9, respectively[1].
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]. Panayiotis A Procopiou, et al. The discovery of long-acting saligenin β_2 adrenergic receptor agonists incorporating a urea group. Bioorg Med Chem. 2011 Oct 15;19(20):6026-32.

[3]. Malcolm Johnson. Effects of beta2-agonists on resident and infiltrating inflammatory cells. J Allergy Clin Immunol. 2002 Dec;110(6 Suppl):S282-90.

[4]. Zhiyuan Wang, et al. Efficacy of salmeterol and formoterol combination treatment in mice with chronic obstructive pulmonary disease. Exp Ther Med. 2018 Feb;15(2):1538-1545.

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