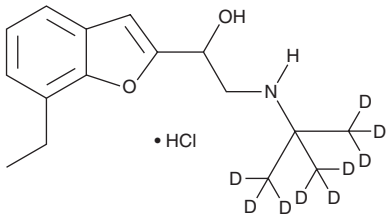
PRODUCT INFORMATION

Bufuralol-d_9 (hydrochloride)

Item No. 29081

CAS Registry No.: 1173023-51-2
Formal Name: α-[[(1,1-dimethylethyl-d_9)amino]methyl]-7-ethyl-2-benzofuranmethanol, monohydrochloride
MF: $C_{16}H_{14}D_9NO_2 \bullet HCl$
FW: 306.9
Chemical Purity: ≥95% (Bufuralol)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_9); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Bufuralol-d_9 (hydrochloride) is intended for use as an internal standard for the quantification of bufuralol (Item No. 17794) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Bufuralol-d_9 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the bufuralol-d_9 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Bufuralol-d_9 (hydrochloride) is slightly soluble in methanol.

Description

Bufuralol is a non-selective antagonist of β-adrenergic receptors (β-ARs) that also has partial agonist activity.[1-3] It decreases mean arterial blood pressure and increases abdominal aortic blood flow in anesthetized cats when administered intravenously at doses of 0.3 and 1 mg/kg.[3] Bufuralol is hydroxylated at the 1' position by the cytochrome P450 (CYP) isoform CYP2D6 and has been used as a substrate to measure CYP2D6 activity.[1,4-6]

References

1. Narimatsu, S., Takemi, C., Kuramoto, S., *et al.* Stereoselectivity in the oxidation of bufuralol, a chiral substrate, by human cytochrome P450s. *Chirality* **15(4),** 333-339 (2003).
2. Pringle, T.H., Francis, R.J., East, P.B., *et al.* Pharmacodynamic and pharmacokinetic studies on bufuralol in man. *Br. J. Clin. Pharmac.* **22(5),** 527-534 (1986).
3. Blaber, L.C., Burden, D.T., Eigenmann, R., *et al.* The effects of bufuralol, a β-adrenoceptor antagonist with predominant β_2-adrenoceptor agonistic activity, in the cat and the dog. *J. Cardiovasc. Pharmacol.* **6(1),** 165-175 (1984).
4. Yamazaki, H., Guo, Z., Persmark, M., *et al.* Bufuralol hydroxylation by cytochrome P450 2D6 and 1A2 enzymes in human liver microsomes. *Mol. Pharmacol.* **46(3),** 568-577 (1994).
5. Paine, M.J.I., Gilham, D., Roberts, G.C.K., *et al.* Functional high level expression of cytochrome P450 CYP2D6 using baculoviral expression systems. *Arch. Biochem. Biophys.* **328(1),** 143-150 (1996).
6. Chen, N., Cui, D., Wang, Q., *et al. In vitro* drug-drug interactions of budesonide: Inhibition and induction of transporters and cytochrome P450 enzymes. *Xenobiotica* **48(6),** 637-646 (2018).

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