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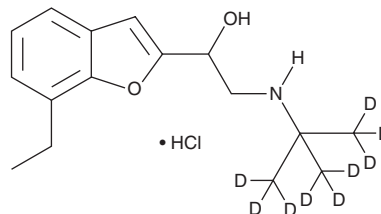
PRODUCT INFORMATION



Bufuralol-d₉ (hydrochloride)

Item No. 29081

CAS Registry No.: 1173023-51-2
Formal Name: α-[[[(1,1-dimethylethyl-d₉)amino]methyl]-7-ethyl-2-benzofuranmethanol, monohydrochloride
MF: C₁₆H₁₄D₉NO₂ • HCl
FW: 306.9
Chemical Purity: ≥95% (Bufuralol)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₉); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Bufuralol-d₉ (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-d₉ (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the bufuralol-d₉ (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Bufuralol-d₉ (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

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2. Pringle, T.H., Francis, R.J., East, P.B., *et al.* Pharmacodynamic and pharmacokinetic studies on bufuralol in man. *Br. J. Clin. Pharmacol.* **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 β₂-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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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