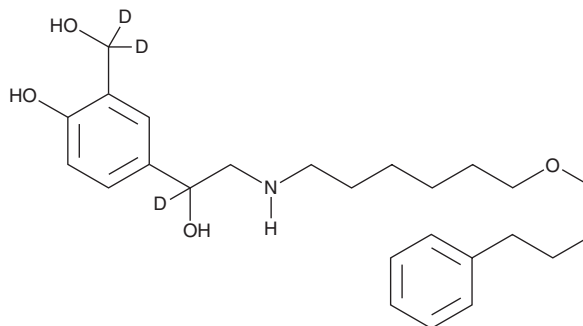


PRODUCT INFORMATION



Salmeterol-d₃ Item No. 26449

CAS Registry No.: 497063-94-2
Formal Name: 6-hydroxy- α^3 -[[[6-(4-phenylbutoxy)hexyl]amino]methyl]-1,3-benzenedimethan- $\alpha^1, \alpha^1, \alpha^3$ -d₃-ol
MF: C₂₅H₃₄D₃NO₄
FW: 418.6
Chemical Purity: ≥98% (Salmeterol)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀
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

Salmeterol-d₃ is intended for use as an internal standard for the quantification of salmeterol (Item No. 16009) 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).

Salmeterol-d₃ is supplied as a solid. A stock solution may be made by dissolving the salmeterol-d₃ in the solvent of choice, which should be purged with an inert gas. Salmeterol-d₃ is soluble in organic solvents such as ethanol and DMSO. The solubility of salmeterol-d₃ in these solvents is approximately 50 and 100 mM, respectively.

Description

Salmeterol is a long-acting β_2 -adrenergic receptor agonist (β_2 -AR; EC₅₀s = 0.79, 63.1, and 9.4 nM for β_2 -, β_1 -, and β_3 -ARs, respectively).¹ It inhibits electrically-stimulated contraction of isolated guinea pig trachea strips (EC₅₀ = 2.51 nM) and histamine-induced bronchoconstriction in guinea pigs via aerosol administration of doses ranging from 0.12 to 12 mM.² Salmeterol binds to an exosite domain of β_2 -adrenergic receptors, producing a slow onset of action and prolonged activation.³ Formulations containing salmeterol have been used in the treatment of asthma, including exercise-induced asthma, and chronic obstructive pulmonary disease.

References

1. Procopiou, P.A., Barrett, V.J., Ford, A.J., *et al.* The discovery of long-acting saligenin β_2 adrenergic receptor agonists incorporating a urea group. *Bioorg. Med. Chem.* **19(20)**, 6026-6032 (2011).
2. Ball, D.I., Brittain, R.T., Coleman, R.A., *et al.* Salmeterol, a novel, long-acting β_2 -adrenoceptor agonist: Characterization of pharmacological activity *in vitro* and *in vivo*. *Br. J. Pharmacol.* **104(3)**, 665-671 (1991).
3. Isin, B., Estiu, G., Wiest, O., *et al.* Identifying ligand binding conformations of the β_2 -adrenergic receptor by using its agonists as computational probes. *PLoS One* **7(12)**, e50186 (2012).

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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