

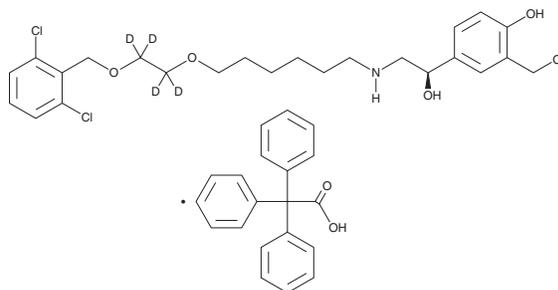
PRODUCT INFORMATION



Vilanterol-d₄ (triphenylacetate)

Item No. 30813

CAS Registry No.: 2021249-10-3
Formal Name: α¹R-[[[6-[2-[(2,6-dichlorophenyl)methoxy]ethoxy-d₄]hexyl]amino)methyl]-4-hydroxy-1,3-benzenedimethanol, triphenylacetate
MF: C₂₄H₂₉Cl₂D₄NO₅ • C₂₀H₁₆O₂
FW: 778.8
Chemical Purity: ≥98% (Vilanterol)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤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

Vilanterol-d₄ (triphenylacetate) is intended for use as an internal standard for the quantification of vilanterol (Item No. 20702) 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).

Vilanterol-d₄ (triphenylacetate) is supplied as a solid. A stock solution may be made by dissolving the vilanterol-d₄ (triphenylacetate) in the solvent of choice, which should be purged with an inert gas. Vilanterol-d₄ (triphenylacetate) is soluble in methanol, DMSO, and dimethyl formamide.

Description

Vilanterol-d₄ is intended for use as an internal standard for the quantification of vilanterol (Item No. 20702) by GC- or LC-MS. Vilanterol is a long-acting agonist of the β₂-adrenergic receptor (β₂-AR).¹ It selectively induces cAMP accumulation in CHO cells expressing the β₂-AR over the β₁- and β₃-ARs (EC₅₀ = 0.4, 398, and 794 nM for the human receptors, respectively). Vilanterol inhibits contractions induced by electrical stimulation in isolated superfused guinea pig trachea strips. It inhibits bronchospasms induced by histamine (Item No. 33828) in guinea pigs when administered *via* nebulization (EC₅₀ = 30 μM). Formulations containing vilanterol, in combination with fluticasone, have been used in the treatment of chronic obstructive pulmonary disease (COPD) and asthma.

Reference

1. Procopiou, P.A., Barrett, V.J., Bevan, N.J., *et al.* Synthesis and structure-activity relationships of long-acting beta2 adrenergic receptor agonists incorporating metabolic inactivation: An antedrug approach. *J. Med. Chem.* **53**(11), 4522-4530 (2010).

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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