



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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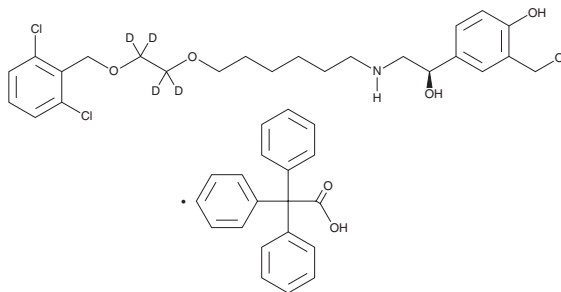
# PRODUCT INFORMATION



## Vilanterol-d<sub>4</sub> (triphenylacetate)

Item No. 30813

**CAS Registry No.:** 2021249-10-3  
**Formal Name:** α<sup>1</sup>R-[[[6-[2-[(2,6-dichlorophenyl)methoxy]ethoxy-d<sub>4</sub>]hexyl]amino]methyl]-4-hydroxy-1,3-benzenedimethanol, triphenylacetate  
**MF:** C<sub>24</sub>H<sub>29</sub>Cl<sub>2</sub>D<sub>4</sub>NO<sub>5</sub> • C<sub>20</sub>H<sub>16</sub>O<sub>2</sub>  
**FW:** 778.8  
**Chemical Purity:** ≥98% (Vilanterol)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**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

Vilanterol-d<sub>4</sub> (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-d<sub>4</sub> (triphenylacetate) is supplied as a solid. A stock solution may be made by dissolving the vilanterol-d<sub>4</sub> (triphenylacetate) in the solvent of choice, which should be purged with an inert gas. Vilanterol-d<sub>4</sub> (triphenylacetate) is soluble in methanol, DMSO, and dimethyl formamide.

### Description

Vilanterol is an ultra-long acting β<sub>2</sub>-adrenoceptor agonist (ultra-LABA) that has 1,000-fold selectivity for β<sub>2</sub>-over other β-receptors (EC<sub>50</sub>s = 398, 0.39, and 794 nM for β<sub>1</sub>, β<sub>2</sub>, and β<sub>3</sub>, respectively).<sup>1,2</sup> In addition to its potency and selectivity, vilanterol is characterized by rapid onset of activity and prolonged duration of action.<sup>1,3</sup>

### References

1. Cazzola, M., Calzetta, L., and Matera, M.G. β<sub>2</sub>-adrenoceptor agonists: Current and future direction. *Br. J. Pharmacol.* **163**(1), 4-17 (2011).
2. Mach, R.H., Nader, M.A., Ehrenkauf, R.L., *et al.* Comparison of two fluorine-18 labeled benzamide derivatives that bind reversibly to dopamine D<sub>2</sub> receptors: In vitro binding studies and positron emission tomography. *Synapse* **24**(4), 322-333 (1996).
3. Procopiu, 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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