

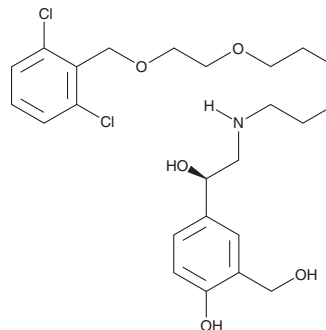
PRODUCT INFORMATION



Vilanterol

Item No. 20702

CAS Registry No.: 503068-34-6
Formal Name: α^1 R-[[[6-[2-[(2,6-dichlorophenyl)methoxy]ethoxy]hexyl]amino]methyl]-4-hydroxy-1,3-benzenedimethanol
Synonyms: GSK642444, GW 642444
MF: C₂₄H₃₃Cl₂NO₅
FW: 486.4
Purity: ≥98%
Supplied as: A solution in ethanol
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 is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of vilanterol in ethanol and DMF is approximately 30 mg/ml and approximately 10 mg/ml in DMSO.

Description

Vilanterol is a long-acting agonist of the β_2 -adrenergic receptor (β_2 -AR).¹ It selectively induces cAMP accumulation in CHO cells expressing the β_2 -AR over the β_1 - and β_3 -ARs (EC₅₀s = 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 μ M). 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 β_2 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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM