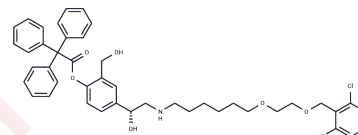


Vilanterol trifenate

Chemical Properties

CAS No. :	503070-58-4
Formula:	C ₄₄ H ₄₉ Cl ₂ N ₂ O ₇
Molecular Weight:	774.77
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	Vilanterol trifenate is a long-acting agonist of β 2-adrenoceptor (β 2-AR) with inherent 24-hour activity(β 2-AR, β 1-AR and β 3-AR pEC ₅₀ s of 10.37, 6.98 and 7.36, respectively)
Targets(IC ₅₀)	Adrenergic Receptor
In vivo	The preclinical pharmacological profile of vilanterol using radioligand binding and cAMP studies in recombinant assays as well as human and guinea pig tissue systems to characterize β (2)-AR binding and functional properties.?Vilanterol displayed a subnanomolar affinity for the β (2)-AR that was comparable with that of salmeterol but higher than olodaterol, formoterol, and indacaterol.?In cAMP functional activity studies, vilanterol demonstrated similar selectivity as salmeterol for β (2)- over β (1)-AR and β (3)-AR, but a significantly improved selectivity profile than formoterol and indacaterol.? Vilanterol also showed a level of intrinsic efficacy that was comparable to indacaterol but significantly greater than that of salmeterol.

Solubility Information

Solubility	DMSO: 100 mg/mL (129.07 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (2.58 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.2907 mL	6.4535 mL	12.9071 mL
5 mM	0.2581 mL	1.2907 mL	2.5814 mL
10 mM	0.1291 mL	0.6454 mL	1.2907 mL
50 mM	0.0258 mL	0.1291 mL	0.2581 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Slack RJ, et al. In vitro pharmacological characterization of vilanterol, a novel long-acting β 2-adrenoceptor agonist with 24-hour duration of action. *J Pharmacol Exp Ther*. 2013 Jan;344(1):218-30

Harrell AW, et al. Metabolism and disposition of Vilanterol, a long-acting β (2)-adrenoceptor agonist for inhalation use in humans. *Drug Metab Dispos*. 2013 Jan;41(1):89-100.

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