Data Sheet (Cat.No.T1239)

TargetMol

Indacaterol maleate

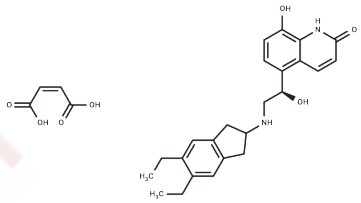
Chemical Properties

CAS No. : 753498-25-8

Formula: C28H32N2O7

Molecular Weight: 508.56

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	Indacaterol maleate (QAB149) is an ultra-long-acting β-adrenoceptor agonist.
Targets(IC50)	Adrenergic Receptor
In vitro	Indacaterol inhibits cAMP production in Chinese hamster ovary cells stably transfected with human β2 adrenoceptors with pEC50 of 8.06. Indacaterol inhibits electrically induced contraction on the electrically stimulated guinea pig trachea in a concentration-dependent manner with pEC50 of 8.23. Indacaterol induces a concentration-dependent inotropic effect with maximal efficacy of 75% in the isolated guinea pig left atrium. [1] Indacaterol reverses the carbachol-induced contraction in a concentration-dependent manner with IC50 of 37 nM in human small airways. Indacaterol concentration dependently reverses the serotonin-induced contraction with IC50 of 10.5 nM in rat small airways. Indacaterol has the highest intrinsic efficacy of 53% in rat small airways and 73% in human small airways. [2] Indacaterol (10 μM) induces close to full inhibition of the EFS-induced contraction of isolated human bronchi and the effect lasts 12 hours. [3] Indacaterol inhibits the IgE-dependent release of histamine from mast cells with the intrinsic activity (Emax of a long-acting Indacaterol/Emax of Isoprenaline) of 1.03. [4] Indacaterol inihbits cAMP release from human airway smooth muscle with pEC50 of 8.53 and Emax of 48%. Indacaterol appears to have a reduced efficacy compared with the CHO-K1 data in the primary ASM cells. [5]
In vivo	Indacaterol (6.7 μg/kg) inhibits 5-HT-induced bronchoconstriction with a maximal effect of 85% in the conscious guinea pig. Indacaterol (12.5 μg/kg) dose-dependently inhibits methacholine-induced bronchoconstriction with a maximal effect of 85% in the anesthetized rhesus monkey. [1]

Solubility Information

Solubility	DMSO: 250 mg/mL (491.58 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 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 (3.93 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one.*

In vivo Formulation	*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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9663 mL	9.8317 mL	19.6634 mL
5 mM	0.3933 mL	1.9663 mL	3.9327 mL
10 mM	0.1966 mL	0.9832 mL	1.9663 mL
50 mM	0.0393 mL	0.1966 mL	0.3933 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

Battram C, et al. J Pharmacol Exp Ther, 2006, 317(2), 762-770.
Sturton RG, et al. J Pharmacol Exp Ther, 2008, 324(1), 270-275.
Naline E, et al. Eur Respir J, 2007, 29(3), 575-581.
Scola AM, et al. Br J Pharmacol, 2009, 158(1), 267-276.
Sayers I, et al. Br J Pharmacol, 2009, 158(1), 277-286.