

Product Data Sheet

Product Name: Indacaterol

Cat. No.: GC13808

Chemical Properties

Cas. No. 312753-06-3

Chemical Name 5-[(1R)-2-[(5,6-diethyl-2,3-dihydro-1H-inden-2-yl)amino]-1-hydroxyethyl]-8-hydroxy-1H-quinolin-2-one

SMILES CCC1=C(C=C2CC(CC2=C1)NCC(C3=C4C=CC(=O)NC4=C(C=C3)O)O)CC

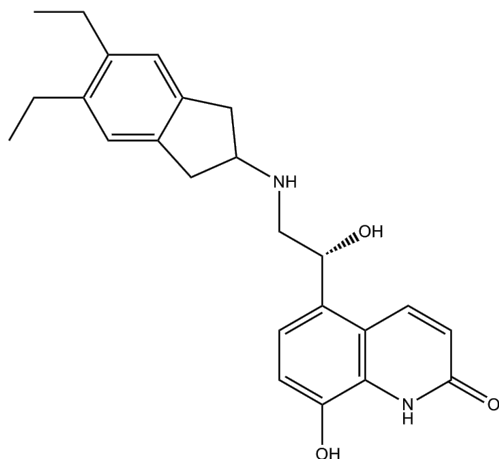
Formula $C_{24}H_{28}N_2O_3$ M.Wt 392.49

Solubility ≥ 12.85 mg/mL in DMSO, ≥ 6.93 mg/mL in EtOH with ultrasonic and warming
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Indacaterol (Onbrez; Arcapta) is an ultra-long-acting β -adrenoceptor agonist. IC_{50} value: Target: β -

Caution: Product has not been fully validated for medical applications. For research use only.

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adrenoceptor Indacaterol inhibits cAMP production in Chinese hamster ovary cells stably transfected with human β_2 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 (6.7 μ g/kg) inhibits 5-HT-induced bronchoconstriction with a maximal effect of 85% in the conscious guinea pig. Indacaterol (12.5 μ g/kg) dose-dependently inhibits methacholine-induced bronchoconstriction with a maximal effect of 85% in the anesthetized rhesus monkey [1].

References:

- [1]. Battram, C., et al., In vitro and in vivo pharmacological characterization of 5-[(R)-2-(5,6-diethyl-indan-2-ylamino)-1-hydroxy-ethyl]-8-hydroxy-1H-quinolin-2-one (indacaterol), a novel inhaled β_2 adrenoceptor agonist with a 24-h duration of action. *J Pharmacol Exp Ther*, 2006. 317(2): p. 762-70.
- [2]. Sturton, R.G., et al., Pharmacological characterization of indacaterol, a novel once daily inhaled β_2 adrenoceptor agonist, on small airways in human and rat precision-cut lung slices. *J Pharmacol Exp Ther*, 2008. 324(1): p. 270-5.

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