

Product Data Sheet

Product Name: Beclometasone dipropionate

Cat. No.: GC35485

Chemical Properties

Cas. No. 5534-09-8

SMILES C[C@@]12[C@](C[C@H](C)[C@]2(OC(CC)=O)C(COC(CC)=O)=O)([H])[C@]3([H])CCC4=CC(C=C[C@]4(C)[C@@]3(Cl)[C@@H](O)C1)=O

Formula C₂₈H₃₇ClO₇ M.Wt 521.04

Solubility DMSO: ≥ 100 mg/mL (191.92 mM); Water: < 0.1 mg/mL (insoluble) 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

Beclometasone dipropionate is a potent glucocorticoid agonist; it is a prodrug of the free form, beclometasone. IC₅₀ Value: 0.2 nM (Inhibiting thymidine incorporation) [1] Target: glucocorticoid receptor in vitro: Cortisol and beclomethasone dipropionate were more potent than salbutamol in inhibiting thymidine incorporation with IC₅₀ values of 5 nM and 0.2 nM respectively. Cortisol 100 nM led to a 16.6 +/- 6.5% reduction and beclomethasone dipropionate 3 nM led to a 17.8 +/- 5.8% reduction in cell number [1]. in vivo: Controlled trials involving 497 adults and children demonstrated similar clinical efficacy between nebulized BDP and either nebulized fluticasone propionate or nebulized budesonide. Meta-analyses show that BDP, like other inhaled corticosteroids, has no major influence on patient height, urinary cortisol concentration, or bone metabolism [2]. Beclometasone dipropionate (BDP) 800 microg day⁻¹ suspension for nebulization and budesonide (BUD) 750 microg day⁻¹ given by nebulization in a twice-daily regimen, and when used in addition to the usual maintenance therapy, resulted in comparable clinical efficacy across all parameters [3]. Clinical trial: Efficacy and Tolerability of

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

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Beclometasone/Formoterol Single Inhaler in Patients With Moderate to Severe Persistent Asthma. Phase 3

[1]. Young PG, Skinner SJ, Black PN. Effects of glucocorticoids and beta-adrenoceptor agonists on the proliferation of airway smooth muscle. *Eur J Pharmacol.* 1995 Jan 24;273(1-2):137-43. [2]. Nicolini G, Cremonesi G, Melani AS. Inhaled corticosteroid therapy with nebulized beclometasone dipropionate. *Pulm Pharmacol Ther.* 2010 Jun;23(3):145-55. [3]. Delacourt C, et al. Comparison of the efficacy and safety of nebulized beclometasone dipropionate and budesonide in severe persistent childhood asthma. *Respir Med.* 2003 Feb;97 Suppl B:S27-33.

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