

Product Data Sheet

Product Name: Beclomethasone 17-propionate

Cat. No.: GC61536

Chemical Properties

Cas. No. 5534-18-9

SMILES C[C@@]12[C@](C(CO)=O)(OC(CC)=O)[C@@H](C)C[C@@]1([H])[C@]3([H])CCC4=C(C(C=C[C@]4(C)[C@@]3(Cl)[C@@H](O)C2)=O

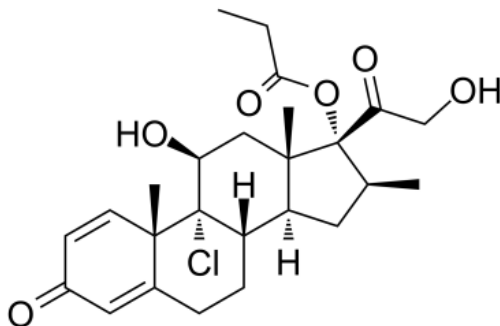
Formula $C_{25}H_{33}ClO_6$ M.Wt 464.98

Solubility DMSO: 100 mg/mL (215.06 mM) Storage -20°C , stored under nitrogen

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

Beclomethasone 17-propionate (Beclomethasone-17-monopropionate), an active metabolite of Beclomethasone dipropionate, is a glucocorticoid receptor (GR) agonist. Beclomethasone 17-propionate exhibits greater affinity for GR than Beclomethasone dipropionate. Beclomethasone 17-propionate effectively suppresses cytokine production in chronic obstructive pulmonary disease (COPD) lung macrophages[1][2][3].

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

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Metabolism of Beclomethasone dipropionate to 17-BMP is an important activation step. Beclomethasone 17-propionate inhibits LPS-stimulated CXCL8, TNF α and IL-6. The EC50 values of Beclomethasone 17-propionate for IL-6, TNF α and CXCL8 were 0.05 nM, 0.01 nM and 0.1 nM, respectively. Beclomethasone 17-propionate evokes upregulation of the GR dependent genes FKBP51 and GILZ[3].

[1]. WÜrthwein G, et al. Activation of beclomethasone dipropionate by hydrolysis to beclomethasone-17-monopropionate. Biopharm Drug Dispos. 1990 Jul;11(5):381-94. [2]. Roberts JK, et al. Metabolism of beclomethasone dipropionate by cytochrome P450 3A enzymes. J Pharmacol Exp Ther. 2013 May;345(2):308-16. [3]. Plumb J, et al. Evaluation of glucocorticoid receptor function in COPD lung macrophages using beclomethasone-17-monopropionate. PLoS One. 2013 May 21;8(5):e64257.

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