Beclometasone dipropionate monohydrate

Cat. No.: HY-13571B

CAS No.: 77011-63-3

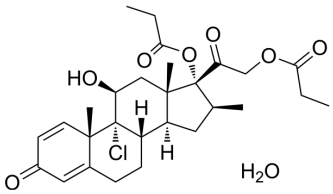
Molecular Formula: $C_{28}H_{39}ClO_8$

Molecular Weight: 539.06

Target: Glucocorticoid Receptor; Reactive Oxygen Species; NO Synthase

Pathway: Immunology/Inflammation; Vitamin D Related/Nuclear Receptor; Metabolic Enzyme/Protease; NF-κB

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Beclometasone dipropionate monohydrate, the proagent of Beclometasone, is an orally active and potent glucocorticoid recepter agonist. Beclometasone dipropionate monohydrate acts via a glucocorticoid receptor and suppresses inflammation and hyperproliferation. Beclometasone dipropionate monohydrate can be used for asthma [1][2].

IC_{50} & Target

iNOS

In Vitro

Beclometasone dipropionate monohydrate (1-100 nM; 20 min) inhibits STAT-1 expression and reduces the levels of iNOS, ROS and NT generated by rhIL-17A in 16HBE cells[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[2]

Cell Line:	16HBE cells
Concentration:	1, 10 and 100 nM
Incubation Time:	20 min
Result:	Reduced the levels of iNOS, ROS and NT generated by rhIL-17A.

In Vivo

Beclometasone dipropionate monohydrate (150 μg/kg; nebulization; male BALB/c mice) relieves asthma and decreases total cell number and relative eosinophil number[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male BALB/c mice with asthma[1]
Dosage:	150 μg/kg
Administration:	Nebulization
Result:	Decreased total cell number and relative eosinophil number in BALF.

CUSTOMER VALIDATION

- Sci Total Environ. 2021, 147288.
- Ind Eng Chem Res. 2019 Aug; 58 (3):16843-16857.
- Institute of Pharmaceutical Science Faculty of Life Sciences and Medicine King's College London. 2018, Oct.

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REFERENCES

[1]. Hrvacić B, et, al. Applicability of an ultrasonic nebulization system for the airways delivery of beclomethasone dipropionate in a murine model of asthma. Pharm Res. 2006 Aug;23(8):1765-75.

[2]. Montalbano AM, et, al. Beclomethasone dipropionate and formoterol reduce oxidative/nitrosative stress generated by cigarette smoke extracts and IL-17A in human bronchial epithelial cells. Eur J Pharmacol. 2013 Oct 15;718(1-3):418-27.

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