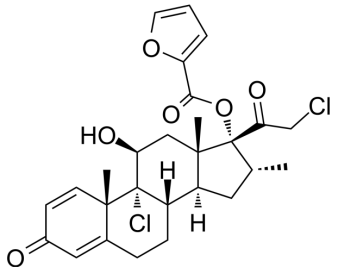
Mometasone furoate

Cat. No.:	HY-13693
CAS No.:	83919-23-7
Molecular Formula:	$C_{27}H_{30}Cl_2O_6$
Molecular Weight:	521.43
Target:	Glucocorticoid Receptor
Pathway:	Immunology/Inflammation; Vitamin D Related/Nuclear Receptor
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (95.89 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9178 mL	9.5890 mL	19.1780 mL
	5 mM	0.3836 mL	1.9178 mL	3.8356 mL
	10 mM	0.1918 mL	0.9589 mL	1.9178 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (4.79 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.79 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Mometasone furoate (Sch32088) is a glucocorticoid receptor agonist with anti-inflammatory and anti-allergic activity. Mometasone furoate acts as a corticosteroid agent and used for topical applications in chronic skin eczema and airway inflammation management of asthma in vivo[1]

IC_{50} & Target

IC50: Glucocorticoid Receptor

In Vitro

Mometasone furoate binds to a glucocorticoid receptor causes conformational changes in the receptor, separation from chaperones, and the receptor moves to the nucleus[1].
?Mometasone furoate (0.1-10 μM; 2h before LPS stimulation) strongly inhibits LPS-stimulated nitrite production in a concentration-dependent manner in J774 macrophages, The IC_{50} value is 0.00024 μM for Mometasone?furoate in J774 cells

[1].

?Mometasone furoate (0.1-10 μM; 2h before LPS stimulation) is more potent than DEX, it significantly inhibits iNOS expression at a 0.01 μM concentration whereas Dex became active at 0.1 μM. Additionally, the inhibition of cox-2 protein expression at 0.01 μM is 79% for Mometasone?furoate and 39% for Dex[1].

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

CUSTOMER VALIDATION

- J Am Chem Soc. 2021 Oct 14.
- Hematology. 2018 Sep;23(8):478-485.

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REFERENCES

[1]. Maria Galuppo, et al. Use of Mometasone furoate in prolonged treatment of experimental spinal cord injury in mice: A comparative study of three different glucocorticoids. Pharmacol Res. 2015 Sep;99:316-28

[2]. https://go.drugbank.com/drugs/DB14512

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

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