Methylprednisolone acetate

Cat. No.: HY-13681

CAS No.: 53-36-1

Molecular Formula: $C_{24}H_{32}O_6$

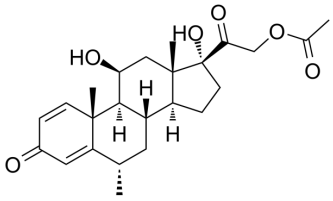
Molecular Weight: 416.51

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	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (240.09 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.4009 mL	12.0045 mL	24.0090 mL
5 mM	0.4802 mL	2.4009 mL	4.8018 mL
10 mM	0.2401 mL	1.2005 mL	2.4009 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.67 mg/mL (4.01 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.67 mg/mL (4.01 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.67 mg/mL (4.01 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Methylprednisolone acetate, a prednisolone derivative, is a corticosteroid hormone. Methylprednisolone acetate can relieve pain and swelling that occurs with arthritis and other joint disorders in vivo[1][2].

In Vivo

Methylprednisolone acetate (30 mg/kg, intramuscular injection; additional oral doses of 13 mg/kg for 10 consecutive days combines with LPS induces typical features of early AVN of the femoral head[2].

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

Animal Model:	A mouse model of osteonecrotic femoral head induced by methylprednisolone and liposaccharide[2]
Dosage:	30 mg/kg; 13 mg/kg for 10 consecutive days
Administration:	30 mg/kg, intramuscular injection; additional oral doses of 13 mg/kg for 10 consecutive days
Result:	Lead to chondrocyte degeneration and fibrocartilage expression after 7 weeks. Increased the density of CD31 and VEGF-R2 markers in the femoral head.

REFERENCES

[1]. Ha Thi -Ngan Le, et al. A mouse model of osteonecrotic femoral head induced by methylprednisolone and liposaccharide. Biomedical Research and Therapy volume 3, Article number: 12 (2016)

[2]. Luis M Franco,et al. Immune regulation by glucocorticoids can be linked to cell type-dependent transcriptional responses. J Exp Med. 2019 Feb 4;216(2):384-406.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA