Meprednisone

Cat. No.: HY-B0243

CAS No.: 1247-42-3

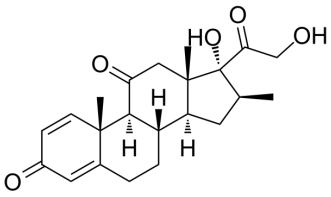
Molecular Formula: $C_{22}H_{28}O_5$

Molecular Weight: 372.45

Target: Glucocorticoid Receptor; Autophagy

Pathway: Immunology/Inflammation; Vitamin D Related/Nuclear Receptor; Autophagy

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (268.49 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.6849 mL	13.4246 mL	26.8492 mL
5 mM	0.5370 mL	2.6849 mL	5.3698 mL
10 mM	0.2685 mL	1.3425 mL	2.6849 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: ≥ 3 mg/mL (8.05 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 3 mg/mL (8.05 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3 mg/mL (8.05 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Meprednisone is a glucocorticoid and a methylated derivative of prednisone.Target: Glucocorticoid ReceptorMeprednisone is a glucocorticoid and a methylated derivative of prednisone. The methylprednisone to MPL area under the curve ratio decreased from 0.19 +/- 0.04 in control to 0.14 +/- 0.03 in ketoconazole-treated rats (P less than .05) due to altered interconversion between these steroids. An improved pharmacokinetic/dynamic receptor/gene-mediated model characterized the steroid receptor binding and induction of tyrosine aminotransferase activity after i.v. MPL sodium succinate (10 mg/kg). In contrast to previous in vitro studies, ketoconazole at maximally tolerated doses failed to antagonize the steroid receptor-mediated activity of MPL [1].

REFERENCES

[1]. Scheuer, E. and E. Warshaw, Allergy to corticosteroids: update and review of epidemiology, clinical characteristics, and structural cross-reactivity. Am J Contact Dermat, 2003. 14(4): p. 179-87.

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