Triamcinolone

Cat. No.: HY-B0328

CAS No.: 124-94-7

Molecular Formula: $C_{21}H_{27}FO_6$

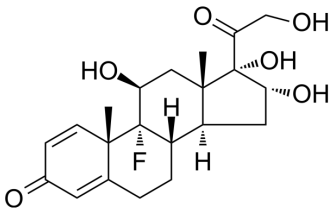
Molecular Weight: 394.43

Target: Glucocorticoid Receptor; Interleukin Related

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 : 83.33 mg/mL (211.27 mM; ultrasonic and warming and heat to 60°C)

H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.5353 mL	12.6765 mL	25.3530 mL
5 mM	0.5071 mL	2.5353 mL	5.0706 mL
10 mM	0.2535 mL	1.2677 mL	2.5353 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: ≥ 2.5 mg/mL (6.34 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.34 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.34 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Triamcinolone is a long-acting corticosteroid with anti-inflammatory, anti-oedematous, anti-proliferative, anti-angiogenetic, immunomodulatory and neuroprotective effects through binding to glucocorticoid receptors. Triamcinolone can relieve several dermatitis, immune diseases and ocular diseases[1][2].

In Vitro

Triamcinolone (0.05-3 mg/mL, 48-60 h) demonstrates a dose dependent inhibition of bovine retinal endothelial cell proliferation[2].

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

Cell Proliferation Assay[2]

Cell Line:	bovine retinal endothelial cell
Concentration:	0.05-3 mg/mL
Incubation Time:	48-60 h
Result:	Demonstrated a dose dependent inhibition of bovine retinal endothelial cell proliferation from 0.05 mg/mL (no inhibition) to 3 mg /mL (complete inhibition). Dosages of more than 2 mg/ml resulted in cytotoxic changes of endothelial cells.

In Vivo

Triamcinolone (40 mg/eye, IVI) demonstrates a significantly lower neovascular cell count of 58% in the treated eyes of retinopathy of prematurity model mice compared to the control group[2].

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

Animal Model:	retinopathy of prematurity model of C57BL/J6 mice[2]
Dosage:	40 mg/eye
Administration:	intravitreal injection (IVI)
Result:	Significantly lowered cell nuclei counts on the vitreal side of the inner limiting membrane in the treated eyes than in the oxygen exposed eyes without treatment (6.3 per histological section versus 14.95 per histological section).

CUSTOMER VALIDATION

- Int J Biol Sci. 2020 Jun 27;16(13):2382-2391.
- Drug Test Anal. 2020 Aug 27.

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REFERENCES

[1]. McAlindon TE, et al. Effect of Intra-articular Triamcinolone vs Saline on Knee Cartilage Volume and Pain in Patients With Knee Osteoarthritis: A Randomized Clinical Trial. JAMA. 2017;317(19):1967-1975.

[2]. Spandau UH, et al. Effect of triamcinolone acetonide on proliferation of retinal endothelial cells in vitro and in vivo. Br J Ophthalmol. 2005 Jun;89(6):745-7.

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