Triamcinolone hexacetonide

Cat. No.: HY-U00103

CAS No.: 5611-51-8

Molecular Formula: $C_{30}H_{41}FO_7$

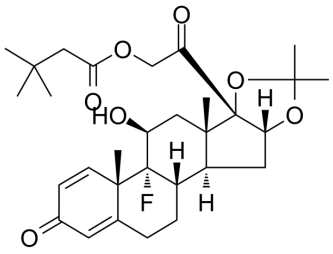
Molecular Weight: 532.64

Target: Others

Pathway: Others

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 : 41.67 mg/mL (78.23 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.8774 mL	9.3872 mL	18.7744 mL
	5 mM	0.3755 mL	1.8774 mL	3.7549 mL
	10 mM	0.1877 mL	0.9387 mL	1.8774 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.91 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Triamcinolone hexacetonide is a commonly used long-acting steroids in treatment of subacute and chronic inflammatory joint diseases.

In Vivo

Triamcinolone hexacetonide produces a marked, dose-dependent protective effect in the model of chemically induced articular cartilage damage. Guinea pig injected with Triamcinolone hexacetonide shows much less prominent fibrillation and osteophytes. Cell loss is less extensive. A single injection of Triamcinolone hexacetonide into the ipsilateral knee of rabbits which have been subjected to partial lateral meniscectomy and transection of the sesamoid and collateral fibular ligaments reduces chondrocyte cloning, loss of cells, osteophyte formation, and fibrillation[1]. The half-life of commercially available Triamcinolone hexacetonide in the vitreous is double that of Triamcinolone hexacetonide, but the former is toxic to the retina in this rabbit model. Reformulated iso-osmolar Triamcinolone hexacetonide shows no evidence of deleterious effects to retina function or structure[2]. Local application of Triamcinolone hexacetonide at a site of lingual nerve injury leads to changes that are potentially beneficial such as reduced mechanical sensitivity and enhanced regeneration[3].

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

PROTOCOL

Animal Administration [1]

Guinea pigs: Animals are given intraarticular injection of 0.1 mL of Triamcinolone hexacetonide provided a dose of 0.40 mg/kg (groups 2 and 3) or 0.04 mg/kg (groups 4 and 5). The volume of CMC injected into the knees of group 6 animals is the same as that used for the intraarticular injections in the other groups, i.e., 0.1 mL. When the animals are killed, both knees are immediately opened and examined grossly[1].

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

REFERENCES

[1]. Williams JM, et al. Triamcinolone hexacetonide protects against fibrillation and osteophyte formation following chemically induced articular cartilage damage. Arthritis Rheum. 1985 Nov;28(11):1267-74.

[2]. Abd-El-Barr MM, et al. Safety and pharmokinetics of triamcinolone hexacetonide in rabbit eyes. J Ocul Pharmacol Ther. 2008 Apr;24(2):197-205.

[3]. Yates JM, et al. The effect of triamcinolone hexacetonide on the spontaneous and mechanically-induced ectopic discharge following lingual nerve injury in the ferret. Pain. 2004 Oct;111(3):261-9.

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