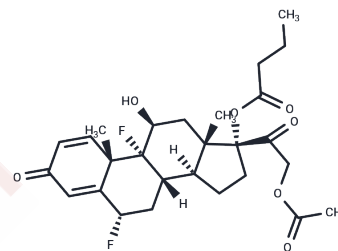


Difluprednate

Chemical Properties

CAS No. :	23674-86-4
Formula:	C ₂₇ H ₃₄ F ₂ O ₇
Molecular Weight:	508.55
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Difluprednate (Myser)(Durezol) is a corticosteroid, approved for the treatment of post-operative ocular inflammation and pain.
Targets(IC50)	Others
In vitro	The difluprednate emulsion formulation begin by suspending DFBA in a variety of oils (castor, cottonseed, medium-chain fatty acid triglyceride, oleic, olive, peanut, and soybean). [1] Difluprednate ophthalmic emulsion's active metabolite, 6 α ,9-difluoroprednisolone 17-butyrate (DFB), has the lowest K _i value (611 nM) for the glucocorticoid receptor and is significantly more active than prednisolone, which has a K _i value of 3.4 nM. [2]
In vivo	Difluprednate emulsion is rapidly deacetylated in the aqueous humor to difluoroprednisolone butyrate (DFB) in rats and rabbits, the drug's active metabolite, which has a similar corticosteroid activity profile. Radio-labeled difluprednate is instilled in the right eyes of pigmented rabbits in a separate study examining DFBA excretion. Difluprednate (0.05% emulsion) results in higher aqueous humor concentrations than the suspension form in the eyes of rabbits. Difluprednate concentrations \geq 0.01% shows a statistically significant inhibition of inflammation compared to saline in a rabbit model, with the anti-inflammatory response proceeding in a dose-dependent manner. Difluprednate suppresses uveitis in all three concentration (0.002%, 0.01%, and 0.05%) in a dose-dependent manner in rats, and difluprednate 0.05% shows statistically superior anti-inflammatory activity compared to Betamethasone (0.1%). [1]

Solubility Information

Solubility	Ethanol: 24 mg/mL (47.19 mM),Sonication is recommended. H ₂ O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 50 mg/mL (98.32 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9664 mL	9.8319 mL	19.6637 mL
5 mM	0.3933 mL	1.9664 mL	3.9327 mL
10 mM	0.1966 mL	0.9832 mL	1.9664 mL
50 mM	0.0393 mL	0.1966 mL	0.3933 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Jamal KN, et al. Clin Ophthalmol, 2009, 3, 381-390.

Donnenfeld ED, et al. Clin Ophthalmol, 2011, 5, 811-816.

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