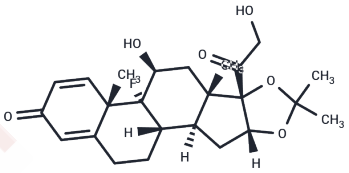
Data Sheet (Cat.No.T0820)

TargetMol

Triamcinolone acetonide

Chemical Properties



CAS No. : 76-25-5

Formula: C24H31FO6

Molecular Weight: 434.50

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Triamcinolone acetonide (Azmacort) is a Corticosteroid. The mechanism of action of triamcinolone acetonide is as a Corticosteroid Hormone Receptor Agonist. It is an anti-inflammatory glucocorticoid used topically in the treatment of various skin disorders. Intralesional, intramuscular, and intra-articular injections are also administered under certain conditions.
Targets(IC50)	Glucocorticoid Receptor,FGFR
In vitro	In horses subjected to a second injection of lipopolysaccharide, Triamcinolone Acetonide reduced edema, lameness, and joint fluid protein concentration. In mice, Triamcinolone Acetonide, a synthetic glucocorticoid, induced cleft palate resulting from impaired palatal development. In the jaws of rat embryos, Triamcinolone Acetonide inhibited the proliferation of mesenchymal cells and affected the differentiation of MEE (Medial Edge Epithelium) cells into stratified squamous epithelial cells. Compared to methoxycarbonyl alone, Triamcinolone Acetonide increased both the white blood cell count and methoxycarbonyl concentration in the synovial fluid.
In vivo	Triamcinolone Acetonide reduced polysaccharide synthesis and increased the glycosaminoglycan (GAG) content in the culture medium compared to the blank group and IL-1 group. It also augmented GAG degradation. This compound significantly decreased the paracellular permeability of ECV304 cells and downregulated ICAM-1 expression, corroborating with immunocytochemical observations. In rat retinas, Triamcinolone reversed Müller glial cell swelling, a phenomenon observed under various experimental conditions: in retinas isolated 3 days post-transient retinal ischemia, in control retinas with 1 mM Ba^2+, 10 μM arachidonic acid, 200 μM H2O2, or 30 nM prostaglandin E2, and in retinas with lipopolysaccharide-induced ocular inflammation.

Solubility Information

Solubility	Ethanol: 13 mg/mL (29.92 mM),Sonication is recommended. DMSO: 100 mg/mL (230.15 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (23.01 mM),Lower concentrations may be soluble, but exact solubility limit is unknown.

In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (23.01 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3015 mL	11.5075 mL	23.015 mL
5 mM	0.4603 mL	2.3015 mL	4.603 mL
10 mM	0.2301 mL	1.1507 mL	2.3015 mL
50 mM	0.046 mL	0.2301 mL	0.4603 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Penfold PL, et al. Clin Exp Immunol,2000, 121(3), 458-465.
Luo X L, Li J X, Huang H R, et al. LL37 inhibits Aspergillus fumigatus infection via directly binding to the fungus and preventing excessive inflammation. Frontiers in Immunology. 2019, 10: 283
Uckermann O, et al. J Pharmacol Exp Ther,2005, 315(3), 1036-1045.
Dechant JE, et al. Equine Vet J. 2003 Jul;35(5):444-50.
Furukawa S, et al. J Vet Med Sci,2004, 66(4), 397-402.
Kay AT, et al. Am J Vet Res,2008, 69(12), 1646-1654.
Luo X L, Li J X, Huang H R, et al. LL37 inhibits Aspergillus fumigatus infection via directly binding to the fungus and preventing excessive inflammation[J]. Frontiers in immunology. 2019 Feb 20;10:283.