

Prednisolone

Chemical Properties

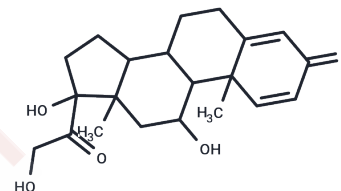
CAS No. : 50-24-8

Formula: C₂₁H₂₈O₅

Molecular Weight: 360.44

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	Prednisolone (Hydroretrocortine) is a synthetic glucocorticoid with anti-inflammatory and immunomodulating properties.
Targets(IC50)	Glucocorticoid Receptor,Endogenous Metabolite
In vitro	In guinea pigs, Prednisolone significantly reduces the partial pressure of oxygen in the pleural lining (PL-oxygen tension). In rats, Prednisolone (5 mg/kg) induces diaphragm contraction and histological alterations, resulting in an increased number of diaphragm bundles.
In vivo	In quadriceps and soleus muscles, Prednisolone (0.75 mg/kg) is effective in reducing the populations of macrophages, CD4(+) T cells, CD8+ T cells, and eosinophils. At a dosage of 50 mg/kg, Prednisolone suppresses the levels of mRNA for NOS stimulated by lipopolysaccharides in neutrophils of mice. Furthermore, Prednisolone mediates its anti-inflammatory effects by decreasing the expression of cell adhesion molecules.

Solubility Information

Solubility	Ethanol: 10 mg/mL (27.74 mM),Sonication is recommended. DMSO: 131 mg/mL (363.44 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (11.1 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7744 mL	13.8719 mL	27.7439 mL
5 mM	0.5549 mL	2.7744 mL	5.5488 mL
10 mM	0.2774 mL	1.3872 mL	2.7744 mL
50 mM	0.0555 mL	0.2774 mL	0.5549 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

- Kolls J, et al. Proc Soc Exp Biol Med, 1994, 205(3), 220-229.
- Rioja I, et al. Clin Exp Immunol, 2004, 137(1), 65-73.
- Bauer A, et al. J Cardiovasc Pharmacol, 2002, 39(3), 460-467.
- Dekhuijzen PN, et al. J Clin Invest, 1993, 92(3), 1534-1542.
- Lamm K, et al. Hear Res, 1998, 115(1-2), 149-161.

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