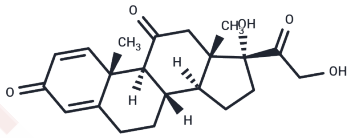
Data Sheet (Cat.No.T1018)

TargetMol

Prednisone

Chemical Properties



CAS No. : 53-03-2

Formula: C21H26O5

Molecular Weight: 358.43

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Prednisone (Dehydrocortisone) is a synthetic glucocorticoid with anti-inflammatory and immunomodulating properties.
Targets(IC50)	Apoptosis,Glucocorticoid Receptor,MRP
In vitro	Prednisone blocks Peripheral blood lymphocytes (PBL) growth in the G1 phase of cell cycle and inhibits both IL-2 receptor (IL-2R) expression and IL-2 secretion in activated human peripheral blood T lymphocytes. Prednisone increases apoptosis in PHA-activated human PBL, and the apoptotic effect of Prednisone is stronger on CD8(+) than on CD4(+) T lymphocytes. [1]
In vivo	Prednisone-treated rats show a significant delay of 20% in learning and memory retention in rats as compared with controls. [2] Prednisone results in reduced weight gain, unchanged alter uterine weight, lowered serum magnesium (Mg), unchange serum calcium (Ca), phosphate (P), 25-hydroxyvitamin D (25OHD), or 1,25-dihydroxyvitamin D [1,25(OH)2D], striking increased in calcified cartilage, reduced cross-sectional area and cortical area, unchange medullary area of the tibial diaphysis, lowered periosteal and endocortical bone formation and apposition rates, increased mean cancellous bone area and cancellous bone perimeter of the tibial metaphysis in both sham-operated and ovariectomized rats. [3] Prednisone-treated rabbit shows a 30% reduction in percent stenosis, a 35% decrease in neointimal area, and a 66% decrement in neointimal thickness. [4] Prednisone treatment significantly reduces the level of TGF-beta1 and HYP in diaphragm from mdx mice to values similar to control mice, but results in a higher level of the HP cross-link compared with untreated mdx mice. [5]

Solubility Information

Solubility	Ethanol: <1 mg/mL, DMSO: 66 mg/mL (184.14 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7899 mL	13.9497 mL	27.8995 mL
5 mM	0.558 mL	2.7899 mL	5.5799 mL
10 mM	0.279 mL	1.395 mL	2.7899 mL
50 mM	0.0558 mL	0.279 mL	0.558 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

Lanza L, et al. Clin Exp Immunol, 1996, 103(3), 482-490.
Ramos-Remus C, et al. J Investig Med, 2002, 50(6), 458-464.
Turner RT, et al. Calcif Tissue Int, 1995, 56(4), 311-315.
Ribichini F, et al. J Am Coll Cardiol, 2007, 50(2), 176-185.
Hartel JV, et al. Muscle Nerve, 2001, 24(3), 428-432.