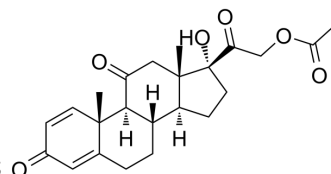


Prednisone acetate

Cat. No.:	HY-B1832												
CAS No.:	125-10-0												
Molecular Formula:	C ₂₃ H ₂₈ O ₆												
Molecular Weight:	400.46												
Target:	Glucocorticoid Receptor; Interleukin Related; Notch												
Pathway:	Immunology/Inflammation; Vitamin D Related/Nuclear Receptor; Neuronal Signaling; Stem Cell/Wnt												
Storage:	<table border="0"> <tr> <td>Powder</td> <td>-20°C</td> <td>3 years</td> </tr> <tr> <td></td> <td>4°C</td> <td>2 years</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>6 months</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 month</td> </tr> </table>	Powder	-20°C	3 years		4°C	2 years	In solvent	-80°C	6 months		-20°C	1 month
Powder	-20°C	3 years											
	4°C	2 years											
In solvent	-80°C	6 months											
	-20°C	1 month											



SOLVENT & SOLUBILITY

In Vitro	DMSO : 25 mg/mL (62.43 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.4971 mL	12.4856 mL	24.9713 mL
		5 mM	0.4994 mL	2.4971 mL	4.9943 mL
		10 mM	0.2497 mL	1.2486 mL	2.4971 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (6.24 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (5.19 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (5.19 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	Prednisone acetate (Prednisone 21-acetate), a glucocorticoid, is an orally active Notch inhibitor. Prednisone acetate has anti-inflammatory activity and can enhance the immune response ^{[1][2]} .		
IC₅₀ & Target	IL-17	IL-10	IL-4
In Vivo	Prednisone acetate (5 mg/kg, Intragastric gavage, once a day for 4 weeks) induces hippocampal LTP impairment by causing		

neuronal lesions in the dentate gyrus, which reduced glutamic acid (Glu) and NMDAR2A, and impaired spatial memory in Hippocampal LTP impairment model mice^[1].

Prednisone acetate (6 mg/kg, gavage, once a day for 15 days) reduces ocular and peripheral inflammatory responses and restores Th1/Th2 and Th17/Treg immune homeostasis through orchestrating the Notch signaling pathway in Experimental autoimmune uveitis (EAU) rats^[2].

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

Animal Model:	C57BL/6 mice ^[1]
Dosage:	5 mg/kg
Administration:	Intragastric gavage (i.g.)
Result:	Significantly failed to gain weight. Decreased the population spike (%) after high-frequency stimulation. Reduced the crossing times compared with the control group. Resulted in the impairment of memory, and caused a trend of more serious impairment. Reduced the levels of Glu and gamma-aminobutyric acid (GABA) in the hippocampus. Reduced the expressions of N-methyl-D-aspartate receptors in the hippocampus.
Animal Model:	Experimental autoimmune uveitis ^[2]
Dosage:	6 mg/kg
Administration:	gavage
Result:	Showed fewer manifestations in eyes from day 9 after immunization. Reduced the inflammation in EAU rats. Bound with the pocket of Notch signaling-related molecules with good affinity. Exhibited anti-inflammatory effects through inhibiting Notch signaling activation. Decreased Th1, Th17 and increased Th2, Treg frequencies in EAU.

REFERENCES

[1]. Wang Y, et al. Intragastric administration of prednisone acetate induced impairment of hippocampal long-term potentiation [J]. Brain Research, 2023, 1805: 148270.

[2]. Zhou M, Qu R, Yin X, et al. Prednisone acetate modulates Th1/Th2 and Th17/Treg cell homeostasis in experimental autoimmune uveitis via orchestrating the Notch signaling pathway [J]. International Immunopharmacology, 2023, 116: 109809.

[3]. Prednisolone acetate

Caution: Product has not been fully validated for medical applications. For research use only.

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