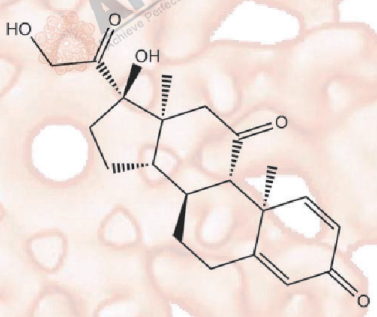
Product Data Sheet

Prednisone



Cat. No.:	B2148
CAS No.:	53-03-2
Formula:	C21H26O5
M.Wt:	358.43
Synonyms:	
Target:	Others
Pathway:	Others
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

insoluble in H2O; insoluble in EtOH; ⩾15.35 mg/mL in DMSO

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.7899 mL	13.9497 mL	27.8995 mL
5 mM	0.5580 mL	2.7899 mL	5.5799 mL
10 mM	0.2790 mL	1.3950 mL	2.7899 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Glucocorticoid receptor agonist
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	Peripheral blood lymphocytes (PBL) or peripheral CD4+ and CD8+ T cell subsets
Preparation method:	The solubility of this compound in DMSO is > 15.4 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months.

	Reacting conditions:	10-3 ~ 10-12 M; 72, 96 and 120 hrs
	Applications:	Prednisone arrested PBL in the G1 phase of cell cycle, and inhibited IL-2 receptor (IL-2R) expression as well as IL-2 secretion. In phytohaemaglutinin (PHA)-activated human PBL, Prednisone significantly increased apoptosis. Moreover, Prednisone exhibited stronger apoptotic effect on CD8+ T lymphocytes than on CD4+ T lymphocytes. All these effects were shown in dose- and time-dependent manners.
In Vivo	**Animal experiment**	
	Animal models:	Male Wistar rats
	Dosage form:	5 mg/kg/d; p.o.; for 90 days
	Applications:	In Wistar rats, Prednisone significantly delayed learning and memory retention by 20%. Compared with the control group, the neuronal degeneration index in the Prednisone treatment group was 2 times higher in the prefrontal cortex, and about 10 times higher in the CA1 hippocampus. In addition, Prednisone substantially increased the number and cytoplasmic transformation of astrocytes, as well as isolectin-B4-labeled microglia cells in the prefrontal cortex.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Lanza L, Scudeletti M, Puppo F, Bosco O, Peirano L, Filaci G, Fecarotta E, Vidali G, Indiveri F. Prednisone increases apoptosis in in vitro activated human peripheral blood T lymphocytes. Clin Exp Immunol. 1996 Mar;103(3):482-90.

[2]. Ramos-Remus C, González-Castaeda RE, González-Perez O, Luquin S, García-Estrada J. Prednisone induces cognitive dysfunction, neuronal degeneration, and reactive gliosis in rats. J Investig Med. 2002 Nov;50(6):458-64.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable

under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

APExBIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com