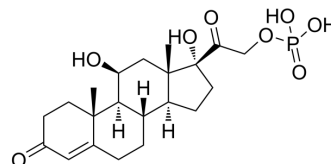


Hydrocortisone phosphate

Cat. No.:	HY-B1155
CAS No.:	3863-59-0
Molecular Formula:	C ₂₁ H ₃₁ O ₈ P
Molecular Weight:	442.44
Target:	Glucocorticoid Receptor; Interleukin Related
Pathway:	Immunology/Inflammation; Vitamin D Related/Nuclear Receptor
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Hydrocortisone phosphate (Hydrocortisone 21-phosphate), a physiological glucocorticoid, and is an orally active steroidal anti-inflammatory agent (SAID). Hydrocortisone phosphate inhibits proinflammatory cytokine activity, with IC ₅₀ s of 6.7 and 21.4 μM for IL-6 and IL-3, respectively. Hydrocortisone phosphate can be used for the research of ulcerative colitis (UC).	
IC₅₀ & Target	IL-6 6.7 μM (IC ₅₀)	IL-3 21.4 μM (IC ₅₀)
In Vitro	Hydrocortisone phosphate inhibits IL-6 and IL-3 bioactivity, with IC ₅₀ s of 6.7 and 21.4 μM, respectively, and shows no cytotoxic effects on IL-6-independent MH60 cells ^[3] . Hydrocortisone phosphate (0.12-60 μM; 72 h) inhibits phytohemagglutinin (PHA) response in peripheral lymphocytes (PBL) and T-lymphocytes cultures ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	Hydrocortisone phosphate (30 mg/kg; p.o. twice daily for 5 d) reduces the weight loss and increases the food intake in mice ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Male Sprague-Dawley rats (200-220 g, 10-11 weeks) are induced colitis ^[2]
	Dosage:	30 mg/kg
	Administration:	P.o. twice daily for 5 days
	Result:	Significantly decreased the disease activity index (DAI) scores and myeloperoxidase (MPO) activity compared to the 2, 4, 6-trinitrobenzenesulfonic acid (TNBS) group. Increased the body weight.

CUSTOMER VALIDATION

- Biomed Pharmacother. 2022 Jun 7;152:113243.

REFERENCES

- [1]. Kang BS, et, al. Inhibitory effects of anti-inflammatory drugs on interleukin-6 bioactivity. *Biol Pharm Bull.* 2001 Jun;24(6):701-3.
- [2]. You YC, et, al. In vitro and in vivo application of pH-sensitive colon-targeting polysaccharide hydrogel used for ulcerative colitis therapy. *Carbohydr Polym.* 2015 Oct 5;130:243-53.
- [3]. Langhoff E, et, al. The immunosuppressive potency in vitro of physiological and synthetic steroids on lymphocyte cultures. *Int J Immunopharmacol.* 1987;9(4):469-73.
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Caution: Product has not been fully validated for medical applications. For research use only.

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