

Product Data Sheet

Product Name: Prednisolone-d7

Cat. No.: GC91756

Chemical Properties

Cas. No. N/A

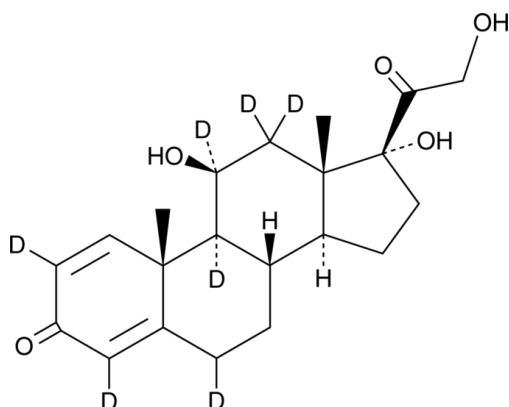
Formula $C_{21}H_{21}O_5D_7$ M.Wt 367.5

Solubility Acetonitrile: Soluble, DMSO: Soluble, Methanol: Soluble Storage $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Prednisolone-d7 is intended for use as an internal standard for the quantification of prednisolone by GC- or LC-MS. Prednisolone is a glucocorticoid and mineralocorticoid receptor agonist and an active metabolite of the prodrugs and synthetic glucocorticoids prednisolone phosphate and prednisone.^{1,2,3} It selectively binds to the glucocorticoid and mineralocorticoid receptors over the progesterone, androgen, and estrogen receptors (K_i s = 2.4, 37, >5,000, 2,762, and >1,000 nM, respectively) and induces transactivation in reporter assays using CV-1 cells expressing the human glucocorticoid receptor or human mineralocorticoid receptor (EC_{50} s = 6.9 and 3.78 nM, respectively).^{2,3} Prednisolone reduces pulmonary eosinophil infiltration in a rat model of sephadex-induced asthma.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

(ED₅₀ = 1.2 mg/kg).^[2] Formulations containing prednisolone have been used as anti-inflammatory or immunosuppressive agents.

References:

- [1]. Frey, B.M., Seeberger, M., and Frey, F.J. Pharmacokinetics of 3 prednisolone prodrugs. Evidence of therapeutic inequivalence in renal transplant patients with rejection. *Transplantation* 39(3)270-274 (1985).
- [2]. Coghlan, M.J., Kym, P.R., Elmore, S.W., et al. Synthesis and characterization of non-steroidal ligands for the glucocorticoid receptor: Selective quinoline derivatives with prednisolone-equivalent functional activity. *J. Med. Chem.* 44(18)2879-2885 (2001).
- [3]. Grossmann, C., Scholz, T., Rochel, M., et al. Transactivation via the human glucocorticoid and mineralocorticoid receptor by therapeutically used steroids in CV-1 cells: A comparison of their glucocorticoid and mineralocorticoid properties. *Eur. J. Endocrinol.* 151(3)397-406 (2004).

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA