

# PRODUCT INFORMATION



## Prednisone-d<sub>7</sub> Item No. 26459

**Formal Name:** 17-hydroxy-17-(2-hydroxyacetyl)-10,13-dimethyl-7,8S,9S,10R,12,13S,14S,15,16,17R-decahydro-3H-cyclopenta[a]phenanthrene-3,11(6H)-dione-2,4,6,6,9,12,12-d<sub>7</sub>

**Synonym:** 1,2-Dehydrocortisone-d<sub>7</sub>

**MF:** C<sub>21</sub>H<sub>19</sub>D<sub>7</sub>O<sub>5</sub>

**FW:** 365.5

**Chemical Purity:** ≥95% (Prednisone)

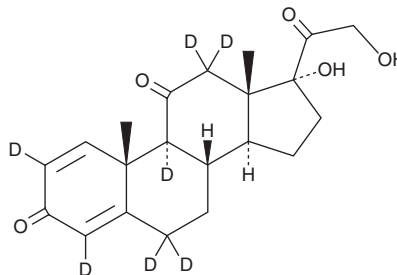
**Deuterium**

**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>7</sub>); ≤1% d<sub>0</sub>

**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Prednisone-d<sub>7</sub> is intended for use as an internal standard for the quantification of prednisone (Item No. 20677) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Prednisone-d<sub>7</sub> is supplied as a solid. A stock solution may be made by dissolving the prednisone-d<sub>7</sub> in the solvent of choice, which should be purged with an inert gas. Prednisone-d<sub>7</sub> is slightly soluble in DMSO.

### Description

Prednisone is a synthetic glucocorticoid with anti-inflammatory and immunosuppressant activities.<sup>1</sup> It inhibits paw swelling induced by sodium urate in mice by 86% when administered at a dose of 12 mg/kg.<sup>2</sup> Prednisone reduces release of IL-6, monocyte chemoattractant protein-2 (MCP-2), MCP-3, RANTES, and TNF-α in stented arteries in a rabbit model of atherosclerosis.<sup>3</sup> Formulations containing prednisone have been used in the treatment of non-Hodgkin lymphoma as part of CHOP chemotherapy and as anti-inflammatory or immunosuppressive agents.

### References

1. Brownie, A.C. The metabolism of adrenal cortical steroids. *The Adrenal Gland*. James, V.H.T., editor, Raven Press, Ltd. (1992).
2. Fitzgerald, T.J., Williams, B., and Uyeki, E.M. Effects of antimitotic and anti-inflammatory agents on sodium urate-induced paw swelling in mice. *Pharmacology* **6(5)**, 265-273 (1971).
3. Ribichini, F., Joner, M., Ferrero, V., et al. Effects of oral prednisone after stenting in a rabbit model of established atherosclerosis. *J. Am. Coll. Cardiol.* **50(2)**, 176-185 (2007).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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