

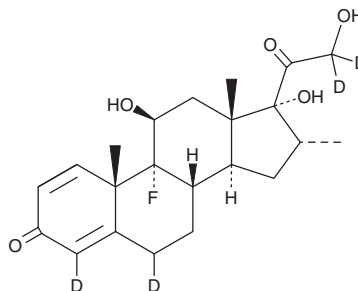
PRODUCT INFORMATION



Dexamethasone-d₄

Item No. 22100

CAS Registry No.: 2483831-63-4
Formal Name: 9-fluoro-11 β ,17,21-trihydroxy-16 α -methyl-pregna-1,4-diene-3,20-dione-4,6,21,21-d₄
MF: C₂₂H₂₅D₄FO₅
FW: 396.5
Chemical Purity: \geq 98% (Dexamethasone)
Deuterium Incorporation: \geq 99% deuterated forms (d₁-d₄); \leq 1% d₀
Supplied as: A solid
Storage: -20°C
Stability: \geq 4 years
Special Conditions: Heat and light sensitive



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

Laboratory Procedures

Dexamethasone-d₄ is intended for use as an internal standard for the quantification of dexamethasone (Item No. 11015) 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).

Dexamethasone-d₄ is supplied as a solid. A stock solution may be made by dissolving the dexamethasone-d₄ in the solvent of choice, which should be purged with an inert gas. Dexamethasone-d₄ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of dexamethasone-d₄ in these solvents is approximately 3, 30, and 25 mg/ml, respectively.

Description

Dexamethasone is a synthetic glucocorticoid that binds the human glucocorticoid receptor with a higher affinity than a natural ligand, cortisol ($K_d = 5$ nM versus 17 nM, respectively).¹ Through receptor activation, dexamethasone has both transactivating and transrepressing effects on gene expression, producing, in general, anti-inflammatory results.²

References

1. Mulatero, P., Panarelli, M., Schiavone, D., *et al.* Impaired cortisol binding to glucocorticoid receptors in hypertensive patients. *Hypertension* **30(5)**, 1274-1278 (1997).
2. Beck, I.M., Vanden Berghe, W., Vermeulen, L., *et al.* Crosstalk in inflammation: The interplay of glucocorticoid receptor-based mechanisms and kinases and phosphatases. *Endocr. Rev.* **30(7)**, 830-882 (2009).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/07/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM