

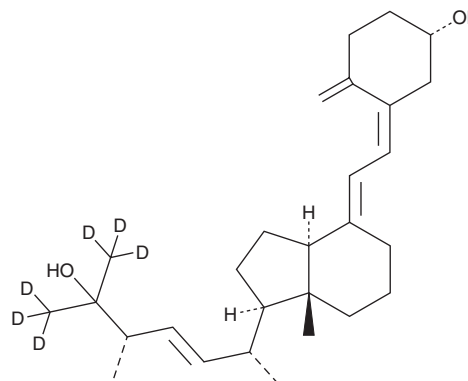
PRODUCT INFORMATION



25-hydroxy Vitamin D₂-d₆

Item No. 34853

CAS Registry No.: 1262843-46-8
Formal Name: 4-methylene-3-[(2E)-2-[(1R,3aS,7aR)-octahydro-1-[(1R,2E,4S)-5-hydroxy-1,4-dimethyl-5-(methyl-d₃)-2-hexen-1-yl-6,6,6-d₃]-7a-methyl-4H-inden-4-ylidene]ethylidene]-cyclohexanol
Synonyms: Ergocalcidiol-d₆, 25-Hydroxyergocalciferol-d₆, 25(OH)-Vitamin D₂-d₆
MF: C₂₈H₃₈D₆O₂
FW: 418.7
Chemical Purity: ≥95% (25-hydroxy Vitamin D₂)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀
Supplied as: A solid
Storage: -80°C
Stability: ≥2 years
Item Origin: Synthetic



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

Laboratory Procedures

25-hydroxy Vitamin D₂-d₆ is intended for use as an internal standard for the quantification of 25-hydroxy vitamin D₂ (Item No. 12078) 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).

25-hydroxy Vitamin D₂-d₆ is supplied as a solid. A stock solution may be made by dissolving the 25-hydroxy vitamin D₂-d₆ in the solvent of choice, which should be purged with an inert gas. 25-hydroxy Vitamin D₂-d₆ is slightly soluble in chloroform and methanol.

Description

25-hydroxy Vitamin D₂ is a metabolite of vitamin D₂ (Item No. 11791).¹ It is formed from vitamin D₂ by the cytochrome P450 (CYP) isoforms CYP2R1 and CYP27A1, which have 25-hydroxylase activity, and is bound to vitamin D binding protein (DBP) and albumin in the liver, then secreted into the bloodstream.² 25-hydroxy Vitamin D₂ is transported to the kidney, where it is preferentially 24-hydroxylated by CYP24A1 to produce 24,25-dihydroxy vitamin D₂.² It can also be hydroxylated by CYP27B1 to produce 1,25-dihydroxy vitamin D₂.^{1,2} Serum levels of 25-hydroxy vitamin D₂ have been used as a marker of vitamin D status.³

References

1. DeLuca, H.F., Sicinski, R.P., Tanaka, Y., *et al.* Biological activity of 1,25-dihydroxyvitamin D₂ and 24-epi-1,25-dihydroxyvitamin D₂. *Am. J. Physiol.* **254**(4 Pt 1), E402-406 (1998).
2. Bikle, D. Vitamin D: Production, metabolism, and mechanisms of action. *Endotext.* Feingold, K.R., Anawalt, B., Boyce, A., *et al.*, editors, *MDText.com, Inc.* (2000).
3. Saenger, A.K., Laha, T.J., Bremner, D.E., *et al.* Quantification of serum 25-hydroxyvitamin D₂ and D₃ using HPLC-tandem mass spectrometry and examination of reference intervals for diagnosis of vitamin D deficiency. *Am. J. Clin. Pathol.* **125**(6), 914-920 (2006).

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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