

PRODUCT INFORMATION

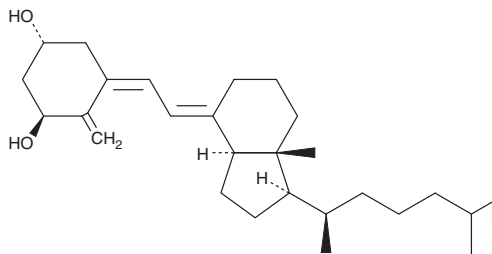


1-hydroxy Vitamin D₃

Item No. 12082

CAS Registry No.: 41294-56-8
Formal Name: 5-[2E-[(3aS)-1R-[1R,5-dimethylhexyl]octahydro-7aR-methyl-4H-inden-4-ylidene]ethylidene]-4-methylene-1R,3R-cyclohexanediol
Synonyms: Alfacalcidol, α -Calcidol, Etalpa, 1-hydroxy Cholecalciferol, Tevabone

MF: C₂₇H₄₄O₂
FW: 400.6
Purity: $\geq 95\%$
UV/Vis.: λ_{max} : 213, 265 nm
Supplied as: A crystalline 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

1-hydroxy Vitamin D₃ is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-hydroxy vitamin D₃ in the solvent of choice, which should be purged with an inert gas. 1-hydroxy Vitamin D₃ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 1-hydroxy vitamin D₃ in these solvents is approximately 20 mg/ml.

1-hydroxy Vitamin D₃ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 1-hydroxy vitamin D₃ should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 1-hydroxy Vitamin D₃ has a solubility of approximately 0.30 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Vitamin D aids in the absorption of calcium and has central roles in bone formation and maintenance, hypertension, cancer, and immunity.^{1,2} 1-hydroxy Vitamin D₃ is a synthetic prodrug which is converted by cytochrome P450 isoforms to the vitamin D receptor agonist 1,25-dihydroxy vitamin D₃ *in vivo*.^{3,4} Such prodrugs are effective in suppressing the synthesis and secretion of parathyroid hormone in secondary hyperparathyroidism, an action which requires the vitamin D receptor.⁴⁻⁶ 1-hydroxy Vitamin D₃ supports bone growth both in postmenopausal women and in glucocorticoid-induced osteoporosis.^{7,8} It also provides renal and cardiovascular protection during chronic kidney disease.^{9,10}

References

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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

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