

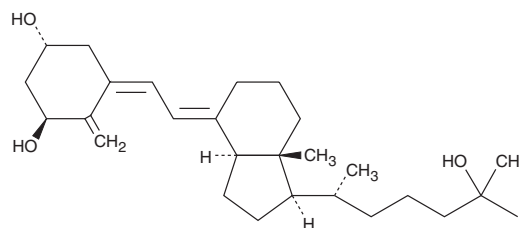
Product Information



Calcitriol

Catalog No. 71820

CAS Registry No.:	32222-06-3
Formal Name:	9,10-secocholesta-5Z,7E,10(19)-triene-1 α ,3 β ,25-triol
Synonym:	1 α ,25-dihydroxy Vitamin D ₃
MF:	C ₂₇ H ₄₄ O ₃
FW:	416.6
Purity:	≥97%
Stability:	≥1 year at -80°C
Supplied as:	A solution in ethanol



Laboratory Procedures

For long term storage, we suggest that calcitriol be stored as supplied at -80°C. It will be stable for at least one year.

Calcitriol is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as acetone, DMSO, and chloroform purged with an inert gas can be used. Calcitriol is slightly soluble in these solvents.

Calcitriol is synthesized from 7-dehydrocholesterol in humans *via* a non-enzymatic photochemical reaction with 290-310 nm UV light in the skin.¹ Hydroxylation of the resulting cholecalciferol in the liver produces 25-hydroxy Vitamin D₃, the principal circulating form of Vitamin D. A second, tightly regulated hydroxylation in the kidney produces calcitriol. Plasma calcitriol levels range from 10-70 pg/ml and are influenced by numerous dietary and hormonal factors.² The main physiologic effects of calcitriol are to increase the absorption of calcium at the level of the intestinal epithelium, and to increase the mineralization of bone *via* the direct stimulation of osteoblasts.³

References

1. Kumar, R. Metabolism of 1,25-dihydroxyvitamin D₃. *Physiol. Rev.* **64**(2), 478-505 (1984).
2. Bikle, D.D., Gee, E., Halloran, B., *et al.* Free 1,25-dihydroxyvitamin D levels in serum from normal subjects, pregnant subjects, and subjects with liver disease. *J. Clin. Invest.* **74**, 1966-1971 (1984).
3. Portale, A.A., Halloran, B.P., and Morris, R.C., Jr. Physiologic regulation of the serum concentration of 1,25-dihydroxyvitamin D by phosphorus in normal men. *J. Clin. Invest.* **83**, 1494-1499 (1989).

Related Product

Adipogenesis Assay Kit - Cat. No. 10006908

WARNING: THIS PRODUCT IS NOT FOR HUMAN OR ANIMAL DISEASE DIAGNOSIS OR THERAPEUTIC DRUG USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSD supervisor at your institution.

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Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will meet our specifications at the time of delivery.

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