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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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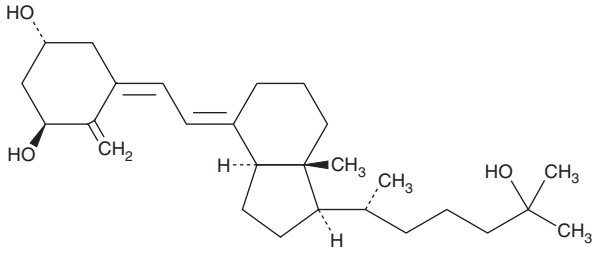
PRODUCT INFORMATION

Calcitriol

Item No. 71820

CAS Registry No.: 32222-06-3
Formal Name: 9,10-secocholesta-5Z,7E,10(19)-triene-1α,3β,25-triol
Synonym: 1α,25-dihydroxy Vitamin D_3
MF: $C_{27}H_{44}O_3$
FW: 416.6
Purity: ≥97%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Special Conditions: Product is light sensitive and air sensitive. Handle under inert conditions.

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

Laboratory Procedures

Calcitriol is supplied as a crystalline solid. A stock solution may be made by dissolving the calcitriol in the solvent of choice, which should be purged with an inert gas. Calcitriol is soluble in organic solvents such as ethanol, methanol, and DMSO. The solubility of calcitriol in ethanol is approximately 1 mg/ml and approximately 50 mg/ml in methanol and DMSO.

Description

Calcitriol is synthesized from 7-dehydro cholesterol 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 D_3, 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 D_3. *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(6),** 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(5),** 1494-1499 (1989).

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