Vitamin D₃
Item No. 11792

CAS Registry No.: 67-97-0
Formal Name: 3Z-[2E-[(1R,3aS,7aR)-1S-[1R,5-dimethylhexyl]octahydro-7a-methyl-4H-inden-4-ylidene]ethylidene]-4-methylene-cyclohexanol
Synonyms: Arachitol, Cholecalciferol, Delsterol, Granuvit D₃, Lutavit D, NSC 375571, Quintox, Ricketon, Trivitan

MF: C₂₂H₄₄O
FW: 384.6
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_max: 213, 265 nm

Vitamin D₃ is supplied as a crystalline solid. A stock solution may be made by dissolving the vitamin D₃ in the solvent of choice. Vitamin D₃ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of vitamin D₃ in ethanol, DMSO, and DMF is approximately 30, 3, and 25 mg/ml, respectively.

Vitamin D₃ is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Vitamin D aids in the absorption of calcium and has central roles in bone formation and maintenance, hypertension, cancer and immunity. Vitamin D₃ is an intermediate form of vitamin D which is obtained from dietary sources, such as fish, or through the conversion of 7-dehydrocholesterol by ultraviolet light. Vitamin D₃ is subsequently metabolized to 25-hydroxyvitamin D₃ and the active form 1,25-dihydroxyvitamin D₃ by cytochrome P450 isoforms in the liver.

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/11792

Warning: This Product is for Laboratory Research Only: Not for Administration to Humans, Not for Human or Veterinary Diagnostic or Therapeutic Use.

Materials 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 via email to your institution.

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References

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