

# PRODUCT INFORMATION



## 1-hydroxy Vitamin D<sub>2</sub>

Item No. 12077

CAS Registry No.: 54573-75-0

Formal Name: 4-methylene-5Z-[2E-[(1R,3aS)-octahydro-7aR-methyl-1R-[1R,4,5-trimethyl-2E-hexen-1-yl]-4H-inden-4-ylidene]ethylidene]-1,3S-cyclohexanediol

Synonyms: Doxercalciferol, Hectorol, 1-Hydroxyergocalciferol, TSA 840

MF: C<sub>28</sub>H<sub>44</sub>O<sub>2</sub>

FW: 412.7

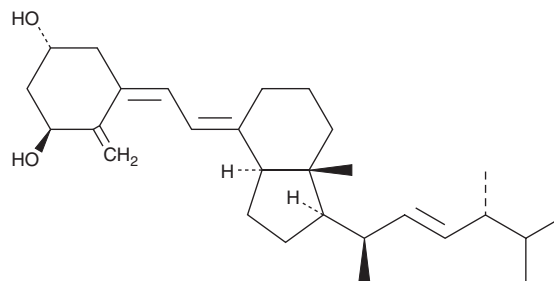
Purity: ≥98%

UV/Vis.: λ<sub>max</sub>: 211, 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 D<sub>2</sub> is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-hydroxy vitamin D<sub>2</sub> in the solvent of choice, which should be purged with an inert gas. 1-hydroxy Vitamin D<sub>2</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 1-hydroxy vitamin D<sub>2</sub> in these solvents is approximately 20 mg/ml.

1-hydroxy Vitamin D<sub>2</sub> is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 1-hydroxy vitamin D<sub>2</sub> should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 1-hydroxy Vitamin D<sub>2</sub> has a solubility of approximately 0.3 mg/ml in a 1:2 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.<sup>1,2</sup> 1-hydroxy Vitamin D<sub>2</sub> is a synthetic prodrug of the active 1,25-dihydroxy vitamin D<sub>2</sub> (Item No. 11174), as well as of other active metabolites.<sup>3</sup> It is used to suppress the synthesis and secretion of parathyroid hormone in secondary hyperparathyroidism, an action which requires vitamin D receptor.<sup>4-6</sup> 1-hydroxy Vitamin D<sub>2</sub> is effective in stimulating bone growth and, in combination therapy with angiotensin receptor blockers, ameliorates albuminuria and glomerulosclerosis associated with diabetic nephropathy.<sup>7,8</sup> It also inhibits the growth of certain blastomas and prostate cancer cells.<sup>9,10</sup>

### 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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