1α,25-Dihydroxyvitamin D3

Active form of vitamin D

1α,25-Dihydroxyvitamin D_3 is the active hormonal form of vitamin D. It inhibits proliferation and induces differentiation of a variety of cells including osteoclasts and HL-60 cells. It is a central regulator of bone and calcium homeostasis. It inhibits proliferation and induces differentiation of a variety of cells including osteoclasts, keratinocytes, HL-60 cells, vascular smooth muscle cells, and bone marrow macrophage precursors. It can activate signal transduction pathways that include hydrolysis of phosphatidylcholine and formation of diacylglycerol in chick myoblasts, and activation of Raf kinase in rat hepatic primary cells and 3T3 fibroblasts. It regulates c-myc proto-oncogene transcription, IL-8 expression, cyclooxygenase induction, and directly activates protein kinase C at physiological concentrations (EC_{50}=16 nM). It up-regulates RANKL level and down-regulates OPG level.

Citations: 47 View Online »

- Ultra-high purity
- Used in bone, immunology, and metabolism studies
- Highly cited

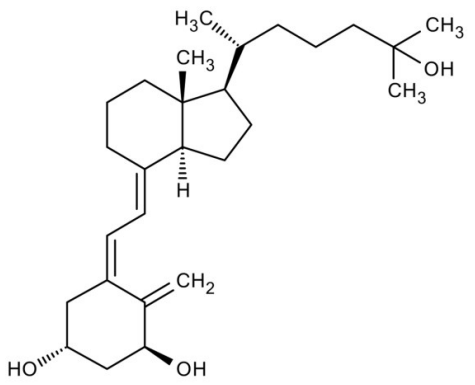
Ordering Information

Order Online »

BML-DM200-1000	1mg
BML-DM200-0050	50µg

Manuals, SDS & CofA

View Online »


H3C
CH3
CH3
OH
CH3
H
CH2
HO
OH

Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended.
Handling	Protect from light. For maximum stability, store solid in the dark under an inert gas such as argon. Store dissolved product in the dark in a tightly sealed container.
Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	1α,25-Dihydroxycholecalciferol, Calcitriol
Appearance	White solid.
CAS	32222-06-3
Couple Target	RANKL, Vitamin D receptor
Couple Type	Activator, Ligand
Formula	$C_{27}H_{44}O_3$
Identity	Identity determined by MS and NMR.
MW	416.6
Purity	≥95% (HPLC)
Solubility	Soluble in acetone, chloroform, DMSO, 100% ethanol, ethyl acetate, or tetrahydrofuran. Evaporative loss of solvent may occur during storage and handling of the dissolved product. If necessary, exact concentration may be re-determined spectrophotometrically.
Source	Synthetic.

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