

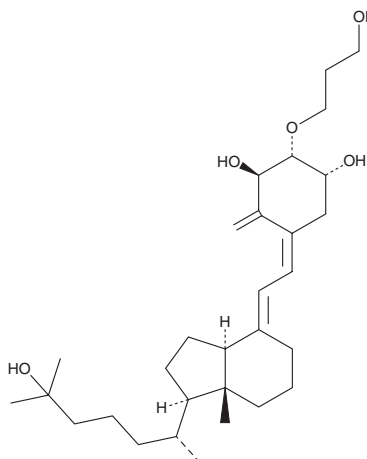
PRODUCT INFORMATION



Eldecalcitol

Item No. 33713

CAS Registry No.: 104121-92-8
Formal Name: 2-(3-hydroxypropoxy)-4-methylene-5-[(2E)-2-[(1R,3aS,7aR)-octahydro-1-[(1R)-5-hydroxy-1,5-dimethylhexyl]-7a-methyl-4H-inden-4-ylidene]ethylidene]-1,3-cyclohexanediol
Synonyms: ED-71, 1 α ,25-dihydroxy-2 β -(3-hydroxypropoxy) Vitamin D₃
MF: C₃₀H₅₀O₅
FW: 490.7
Purity: \geq 98%
Supplied as: A solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

Eldecalcitol is supplied as a solid. A stock solution may be made by dissolving the eldecalcitol in the solvent of choice, which should be purged with an inert gas. Eldecalcitol is slightly soluble in methanol and acetonitrile.

Eldecalcitol is slightly 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.

Description

Eldecalcitol is a derivative of the vitamin D₃ receptor agonist and vitamin D₃ active metabolite calcitriol (Item No. 71820).^{1,2} It induces calcium release in an *in vitro* bone mobilization assay using isolated mouse calvaria when used at a concentration of 10 nM.¹ Eldecalcitol (50 nM) reduces LPS-induced pyroptosis and increases in hydrogen peroxide and protein levels of the NOD-like receptor protein 3 (NLRP3) inflammasome, caspase-1, and IL-1 β in primary human gingival fibroblasts.³ Eldecalcitol (0.4 nM) induces apoptosis and cell cycle arrest at the G₀/G₁ phase in, and inhibits migration of, SCC-15 and CAL 27 squamous cell carcinoma cells and decreases tumor volume in an SCC-15 mouse xenograft model when administered at a dose of 0.5 μ g/kg twice per week.⁴ Eldecalcitol (0.3 μ g/kg) decreases serum parathyroid hormone (PTH) levels and increases serum calcium levels, bone mineral density, and bone strength in a cynomolgus monkey model of osteoporosis induced by ovariectomy.² Formulations containing eldecalcitol have been used in the treatment of osteoporosis.

References

1. Okano, T., Tsugawa, N., Masuda, S., et al. *Biochem. Biophys. Res. Commun.* **163**(3), 1444-1449 (1989).
2. Smith, S.Y., Doyle, N., Boyer, M., et al. *Bone* **57**(1), 116-122 (2013).
3. Huang, C., Zhang, C., Yang, P., et al. *Drug Des. Devel. Ther.* **14**, 4901-4913 (2020).
4. Lu, Y., Kou, Y., Gao, Y., et al. *Oral Dis.* **29**(2), 615-627 (2023).

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.

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