



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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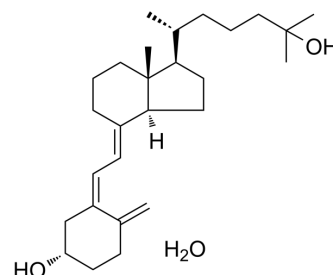
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## Calcifediol monohydrate

|                    |                                                                                                                                                |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Cat. No.:          | HY-32351A                                                                                                                                      |
| CAS No.:           | 63283-36-3                                                                                                                                     |
| Molecular Formula: | C <sub>27</sub> H <sub>46</sub> O <sub>3</sub>                                                                                                 |
| Molecular Weight:  | 418.65                                                                                                                                         |
| Target:            | Endogenous Metabolite; VD/VDR                                                                                                                  |
| Pathway:           | Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor                                                                                  |
| Storage:           | -20°C, protect from light, stored under nitrogen<br>* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen) |



### SOLVENT & SOLUBILITY

|                                                                               |                                                                                                                               |                                                      |           |            |            |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-----------|------------|------------|
| In Vitro                                                                      | DMSO : 50 mg/mL (119.43 mM; Need ultrasonic)                                                                                  |                                                      |           |            |            |
|                                                                               | Preparing Stock Solutions                                                                                                     | <div>Solvent<br/>Concentration</div> <div>Mass</div> | 1 mg      | 5 mg       | 10 mg      |
|                                                                               |                                                                                                                               |                                                      |           |            |            |
|                                                                               |                                                                                                                               | 1 mM                                                 | 2.3886 mL | 11.9432 mL | 23.8863 mL |
|                                                                               |                                                                                                                               | 5 mM                                                 | 0.4777 mL | 2.3886 mL  | 4.7773 mL  |
|                                                                               |                                                                                                                               | 10 mM                                                | 0.2389 mL | 1.1943 mL  | 2.3886 mL  |
| Please refer to the solubility information to select the appropriate solvent. |                                                                                                                               |                                                      |           |            |            |
| In Vivo                                                                       | 1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)<br>Solubility: ≥ 2.5 mg/mL (5.97 mM); Clear solution |                                                      |           |            |            |
|                                                                               | 2. Add each solvent one by one: 10% DMSO >> 90% corn oil<br>Solubility: ≥ 2.5 mg/mL (5.97 mM); Clear solution                 |                                                      |           |            |            |
|                                                                               |                                                                                                                               |                                                      |           |            |            |

### BIOLOGICAL ACTIVITY

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description               | Calcifediol monohydrate (25-hydroxy Vitamin D3 monohydrate), a major circulating metabolite of vitamin D3, is a potent VDR ligand <sup>[1][2]</sup> .                                                                                                                                                                                                                                                                                |
| IC <sub>50</sub> & Target | Human Endogenous Metabolite                                                                                                                                                                                                                                                                                                                                                                                                          |
| In Vitro                  | Calcifediol in either liposomes or ethanolic solution has no effect on the release of the proinflammatory cytokine KC from Pseudomonas-infected murine epithelial cells. Treatment of infected, human bronchial 16-HBE cells with Calcifediol liposomes results in a significant reduction in bacterial survival <sup>[1]</sup> .<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

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## CUSTOMER VALIDATION

- Nat Chem Biol. 2022 Aug 18.
- Proc Natl Acad Sci U S A. 2022 Apr 12;119(15):e2117004119.
- Int Immunopharmacol. 2023 Jun 30;122:110558.
- Front Pharmacol. 2020 Mar 31;11:200.
- Int J Mol Sci. 2017 Dec 19;18(12). pii: E2764.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Castoldi A, et al. Calcifediol-loaded liposomes for local treatment of pulmonary bacterial infections. Eur J Pharm Biopharm. 2016 Nov 22.

[2]. Wei Zheng, et al. Vitamin D-induced vitamin D receptor expression induces tamoxifen sensitivity in MCF-7 stem cells via suppression of Wnt/ $\beta$ -catenin signaling. Biosci Rep. 2018 Dec 7;38(6):BSR20180595.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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