# Data Sheet

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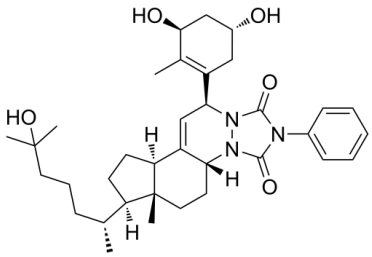
| **Product Name:** | Impurity C of Calcitriol |
| **Cat. No.:** | CS-1177 |
| **CAS No.:** | 86307-44-0 |
| **Molecular Formula:** | $C_{35}H_{49}N_3O_5$ |
| **Molecular Weight:** | 591.78 |
| **Target:** | VD/VDR |
| **Pathway:** | Vitamin D Related/Nuclear Receptor |
| **Solubility:** | DMSO : 50 mg/mL (84.49 mM; Need ultrasonic) |




## BIOLOGICAL ACTIVITY:

Impurity C of Calcitriol, Calcitriol(1,25-Dihydroxyvitamin D3; Rocaltrol ) is the hormonally active form of vitamin D, Calcitriol is the active metabolite of vitamin D3 that activates the vitamin D receptor (VDR). IC50 value: Target: vitamin D receptor Calcitriol(1,25-Dihydroxyvitamin D3; Rocaltrol ) displays calcemic actions. Calcitriol stimulates intestinal and renal Ca2+ absorption and regulates bone Ca2+ turnover. Calcitriol (1,25-Dihydroxyvitamin D3; Rocaltrol )exhibits antitumor activity; Calcitriol(1,25-Dihydroxyvitamin D3; Rocaltrol ) inhibits in vivo and in vitro cell proliferation in a wide range of cells including breast, prostate, colon, skin and brain carcinomas and myeloid leukemia cells.

## References:

[1]. Canalejo et al (2000) The in vitro effect of calcitriol on parathyroid cell proliferation and apoptosis. J.Am.Soc.Nephrol. 11 1865. Beer and Myrthue (2004)

[2]. Calcitriol in cancer treatment: from the lab to the clinic. Mol.Cancer Ther. 3 373.

[3]. Krishnan AV, Swami S, Feldman D.Equivalent anticancer activities of dietary vitamin D and calcitriol in an animal model of breast cancer: Importance of mammary CYP27B1 for treatment and prevention.J Steroid Biochem Mol Biol. 2012 Aug 23.

[4]. Alkharfy KM, Al-Daghri NM, Yakout SM, Ahmed M. Calcitriol Attenuates Weight-Related Systemic Inflammation and Ultrastructural Changes of the Liver in a Rodent Model.Basic Clin Pharmacol Toxicol. 2012 Aug 21.

## CAIndexNames:

1H,5H-Cyclopenta[f][1,2,4]triazolo[1,2-a]cinnoline-1,3(2H)-dione, 11-(3,5-dihydroxy-2-methyl-1-cyclohexen-1-yl)-4a,6,6a,7,8,9,9a,11-octahydro-7-(5-hydroxy-1,5-dimethylhexyl)-6a-methyl-2-phenyl-, [4aR-[4aα,6aα,7α(R*),9aβ,11α(3S*,5R*)]]- (9CI)

## SMILES:

O[C@@H](C[C@@H]1O)CC([C@@H]2C=C3[C@@](CC[C@]4([H])[C@@H](CCCC(C)(O)C)C)([H])[C@]4(C)CC[C@@]3([H])N(C(N5C6=CC=CC=C6)=O)N2C5=O)=C1C

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

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