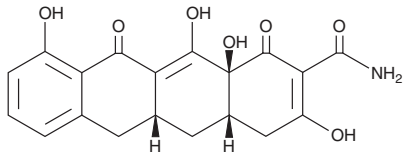
PRODUCT INFORMATION

Incyclinide

Item No. 34597

CAS Registry No.: 15866-90-7
Formal Name: (4aS,5aR,12aS)-1,4,4a,5,5a,6,11,12a-octahydro-3,10,12,12a-tetrahydroxy-1,11-dioxo-2-naphthacenecarboxamide
Synonyms: CMT-3, COL-3, NSC 683551
MF: $C_{19}H_{17}NO_7$
FW: 371.3
Purity: ≥98%
Supplied as: A 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

Incyclinide is supplied as a solid. A stock solution may be made by dissolving the incyclinide in the solvent of choice, which should be purged with an inert gas. Incyclinide is soluble in DMSO.

Description

Incyclinide is a non-antimicrobial chemically modified tetracycline (CMT) and an inhibitor of matrix metalloproteinase-13 (MMP-13), MMP-1, and MMP-8 (IC_{50}s = 0.3, 34, and 48 µg/ml, respectively).[1] It inhibits chick osteoclast digestion of isolated bovine bone when used at a concentration of 5 µg/ml and inhibits IL-1-induced glycosaminoglycan release from porcine articular cartilage explants at 10 µg/ml. Incyclinide (10 µM) also induces cytotoxicity of HeLa and SiHa human cervical cancer cells, as well as induces apoptosis in HeLa cells and cell cycle arrest at the G_0/G_1 phase in SiHa cells.[2]

References

1. Greenwald, R.A., Golub, L.M., Ramamurthy, N.S., *et al*. In vitro sensitivity of the three mammalian collagenases to tetracycline inhibition: Relationship to bone and cartilage degradation. *Bone* **22(1)**, 33-38 (1998).
2. Zhao, L., Xu, J., Yang, Y., *et al*. Inhibitory impacts of chemically modified tetracycline-3 and underlying mechanism in human cervical cancer cells. *Anticancer Drugs* **24(8)**, 799-809 (2013).

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