

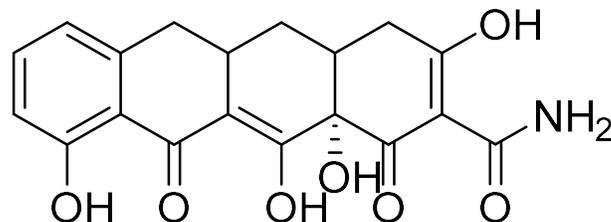
4-Dedimethylaminosancycline (CMT-3)

Catalog number: B-0802

Molecular Formula: C₁₉H₁₇NO₇

MW: 371.10

CAS: 15866-90-7



Alternate Names: 6-Demethyl-6-deoxy-4-dedimethylaminotetracycline, COL-3, Incyclinide, NSC-683551

Solubility: DMF, DMSO. Limited solubility in water.

Storage and Handling: Store dry at -20 °C. Stock solutions should be stored frozen (-20 °C or below).

Background: Chemically modified tetracyclines show activity in mammalian cell pathways and diseases related to cancer, inflammation, and neurodegenerative pathways. CMT-3 acts as matrix metalloproteinase (MT-MMP) inhibitor. It has been studied in disorders of collagen destruction, excessive TNF activity, excessive nitric oxide activity, excessive IL-1 activity, excessive activity of elastase, bone loss, protein degradation, muscle wasting, collagen glycosylation, phospholipase A₂ activity. In addition, it has been investigated for the treatment of aneurysms, ulcerations, periodontal disease, diabetes, scleroderma, progeria, cancer, and diseases of bone marrow function and thrombocytopenia

References: 1) Nip, L H, Uitto, V J, Golub, L M, "Inhibition of epithelial cell matrix metalloproteinases by tetracyclines" *J. Periodontal Research*, **1993**, 28(5), 379-85. DOI:10.1111/j.1600-0765.1993.tb01082 2) Sasaki, T, Kaneko, H, Ramamurthy, N S, Golub, L M, "Tetracycline administration restores osteoblast structure and function during experimental diabetes" *Anatomical Record*, **1991**, 231(1), 25-34. DOI:10.1002/ar.1092310105. 3) Schneider, B S, Maimon, J, Golub, L M, Ramamurthy, N S, Greenwald, R A, "Tetracyclines inhibit intracellular muscle proteolysis in vitro" *Biochemical and Biophysical Research Communications*, **1992**, 188(2), 767-72 DOI:10.1016/0006-291X(92)91122-7. 4) Seftor, R E B, Seftor, E A, De Larco, J E, Kleiner, D E, Leferson, J, Stetler-Stevenson, W G, McNamara, T F, Golub, L M, Hendrix, M J C, "Chemically modified tetracyclines inhibit human melanoma cell invasion and metastasis" *Clinical & Experimental Metastasis*, **1998**, 16(3), 217-225.

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

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