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产品名称：Incyclinide
产品别名：CMT-3; COL-3

生物活性：

Description	Incyclinide (CMT-3, COL-3) is a matrix metalloproteinase (MMP) inhibitor, thereby inducing extracellular matrix degradation, and inhibiting angiogenesis, tumor growth and invasion, and metastasis.
In Vitro	Incyclinide has been shown to experimentally suppress prostate cancer, colon adenocarcinoma and melanoma invasiveness in cell culture. Adding incyclinide at final concentrations of 5 to 20 μM inhibits MT1-MMP gelatinolytic and caseinolytic activity, blocks MT1-MMPactivation of pro-MMP-2, and decreases invasiveness of HT-1080 fibrosarcoma cells[1]. Incyclinide is an especially effective inhibitor of the growth and viability of filamentous fungi. Most of the MICs of CMT-3 against filamentous fungi are found to be between 0.25 and 8 μg/mL, and the inhibition of viability of these fungi by incyclinide is routinely higher than 90%[2].
In Vivo	Incyclinide inhibits tooth movement in the rat, probably by reducing the number of osteoclasts at the compression side. This might be due to induction of apoptosis in activated osteoclasts or reduced osteoclast migration. Reduced MMP activity by incyclinide might also directly inhibit degradation of the organic bone matrix[3].

Solvent&Solubility

In Vitro:

DMSO : ≥ 100 mg/mL (269.29 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6929 mL	13.4647 mL	26.9295 mL
	5 mM	0.5386 mL	2.6930 mL	5.3859 mL
	10 mM	0.2693 mL	1.3465 mL	2.6930 mL

*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

In Vivo:

请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 In Vitro 方式配制澄清的储备液，再依次添加助溶剂：

——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用； 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶

1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline

Solubility: 2.5 mg/mL (6.73 mM); Suspended solution; Need ultrasonic

此方案可获得 2.5 mg/mL (6.73 mM)的均匀悬浊液，悬浊液可用于口服和腹腔注射。

以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。

References	[1]. Lee HM, et al. CMT-3, a non-antimicrobial tetracycline (TC), inhibits MT1-MMPactivity: relevance to cancer. Curr Med Chem. 2001 Feb;8(3):257-60. [2]. Liu Y, A chemically modified tetracycline (CMT-3) is a new antifungal agent. Antimicrob Agents Chemother. 2002 May;46(5):1447-54. [3]. Bildt MM, et al. CMT-3 inhibits orthodontic tooth displacement in the rat. Arch Oral Biol. 2007 Jun;52(6):571-8.