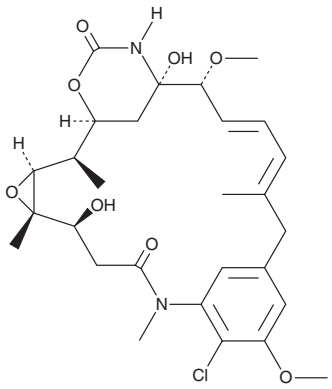
PRODUCT INFORMATION

Maytansinol

Item No. 29228

CAS Registry No.:	57103-68-1
Formal Name:	3-O-de[2-(acetylmethylamino)-1-oxopropyl]-maytansine
Synonyms:	Ansamitocin P-0, Antibiotic C-15003P0, NSC 239386
MF:	$C_{28}H_{37}ClN_2O_8$
FW:	565.1
Purity:	≥95%
UV/Vis.:	λ_{max}: 232, 244, 253 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Maytansinol is supplied as a crystalline solid. A stock solution may be made by dissolving the maytansinol in the solvent of choice, which should be purged with an inert gas. Maytansinol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of maytansinol in these solvents is approximately 10, 20, and 25 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of maytansinol can be prepared by directly dissolving the crystalline solid in aqueous buffers. Maytansinol is slightly soluble in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Maytansinol is an ansa macrolide originally isolated from *P. verrucose* that has antimitotic and anticancer activities.[1-3] It inhibits polymerization and induces depolymerization of bovine brain tubulin with EC_{50} values of 12 and 43 µM, respectively.[2] Maytansinol inhibits sea urchin egg mitosis when used at a concentration of 10 µM and decreases proliferation of KB nasopharyngeal cancer cells (EC_{50} = 0.19 µg/ml).[3]

References

1. Kupchan, S.M., Branfman, A.R., Sneden, A.T., *et al.* Novel maytansinoids. Naturally occurring and synthetic antileukemic esters of maytansinol. *J. Am. Chem. Soc.* **97(18)**, 5294-5295 (1975).
2. Ikeyama, S. and Takeuchi, M. Antitubulin activities of ansamitocins and maytansinoids. *Biochem. Pharmacol.* **30(17)**, 2421-2425 (1981).
3. Kupchan, S.M., Sneden, A.T., Branfman, A.R., *et al.* Structural requirements for antileukemic activity among the naturally occurring and semisynthetic maytansinoids. *J. Med. Chem.* **21(1)**, 31-37 (1978).

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