

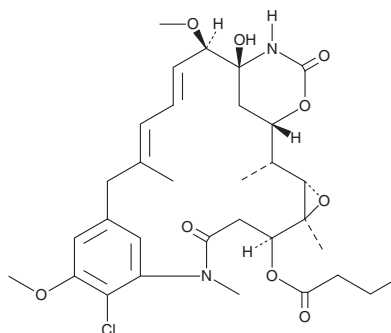
# PRODUCT INFORMATION



## Ansamitocin P-3

Item No. 20538

**CAS Registry No.:** 66547-09-9  
**Formal Name:** 3-O-de[2-(acetylmethylamino)-1-oxopropyl]-3-O-(1-oxobutyl)-maytansine  
**Synonyms:** Antibiotic C-15003P3, Maytansinol butyrate  
**MF:** C<sub>32</sub>H<sub>43</sub>ClN<sub>2</sub>O<sub>9</sub>  
**FW:** 635.2  
**Purity:** ≥85%  
**UV/Vis.:** λ<sub>max</sub>: 232, 251, 280 nm  
**Supplied as:** A crystalline 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

Ansamitocin P-3 is supplied as a crystalline solid. A stock solution may be made by dissolving the ansamitocin P-3 in the solvent of choice. Ansamitocin P-3 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of ansamitocin P-3 in these solvents is approximately 1, 10, and 20 mg/ml, respectively.

Ansamitocin P-3 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ansamitocin P-3 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Ansamitocin P-3 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Ansamitocin P-3 is a microtubule depolymerizing agent that can be isolated from culture broths of certain Gram-positive bacteria.<sup>1,2</sup> It binds tubulin (K<sub>d</sub> = 1.3 μM), depolymerizes microtubules in both interphase and mitosis, and perturbs chromosome segregation.<sup>3</sup> Ansamitocin P-3 also activates the spindle checkpoint surveillance proteins Mad2 and BubR1, blocking cell cycling during mitosis.<sup>3</sup> It inhibits the growth of cancer cells in culture and significantly suppresses the growth of several cancer tumors in mice, prolonging survival time.<sup>1,3</sup>

### References

1. Ootsu, K., Kozai, Y., Takeuchi, M., *et al.* Effects of new antimetabolic antibiotics, ansamitocins, on the growth of murine tumors *in vivo* and on the assembly of microtubules *in vitro*. *Cancer Res.* **40(5)**, 1707-1717 (1980).
2. Kiso, T., Fujita, J.-I., Ping, X., *et al.* Screening for microtubule-disrupting antifungal agents by using a mitotic-arrest mutant of *Aspergillus nidulans* and novel action of phenylalanine derivatives accompanying tubulin loss. *Antimicrob. Agents Chemother.* **48(5)**, 1739-1748 (2004).
3. Venghateri, J.B., Gupta, T.K., Verma, P.J., *et al.* Ansamitocin P3 depolymerizes microtubules and induces apoptosis by binding to tubulin at the vinblastine site. *PLoS One* **8(10)**, e75182 (2013).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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