

# PRODUCT INFORMATION



## Steffimycin B

Item No. 28087

**CAS Registry No.:** 54526-94-2  
**Formal Name:** (2S,3S,4R)-4-[(6-deoxy-2,4-di-O-methyl- $\alpha$ -L-mannopyranosyl)oxy]-3,4-dihydro-2,5,7-trihydroxy-3,9-dimethoxy-2-methyl-1,6,11(2H)-naphthacenetriene  
**Synonyms:** NSC 204855, U 40615

**MF:**  $C_{29}H_{32}O_{13}$

**FW:** 588.6

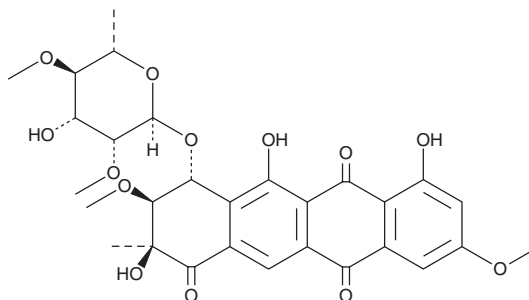
**Purity:**  $\geq 99\%$

**Supplied as:** A lyophilisate

**Storage:**  $-20^{\circ}\text{C}$

**Stability:**  $\geq 4$  years

**Item Origin:** Bacterium/*Streptomyces* sp.



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

### Laboratory Procedures

Steffimycin B is supplied as a lyophilisate. A stock solution may be made by dissolving the steffimycin B in the solvent of choice, which should be purged with an inert gas. Steffimycin B is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

### Description

Steffimycin B is an anthracycline bacterial metabolite originally isolated from *Streptomyces*.<sup>1</sup> It binds to DNA, preferentially intercalating at sites containing cytosine and guanine.<sup>2</sup> Steffimycin B is cytotoxic to MCF-7, KB, NCI-H187, and Vero cells ( $IC_{50}$ s = 3.5, 6.75, 3.28, and 10.5  $\mu\text{M}$ , respectively).<sup>3</sup> It is active against *M. tuberculosis* (MIC = 5.2 nM), *B. cereus* (MIC = 1.56  $\mu\text{g/ml}$ ), and *P. falciparum* ( $IC_{50}$  = 2.19  $\mu\text{M}$ ).

### References

1. Trenado-Urbe, M., Silva-Miranda, M., Rivero-Cruz, J.F., *et al.* Antimycobacterial activity of an anthracycline produced by an endophyte isolated from *Amphipterygium adstringens*. *Mol. Biol. Rep.* **45(6)**, 2563-2570 (2018).
2. Jones, M.B., Holstein, U., and Allen, F.S. Site specificity of binding of antitumor antibiotics to DNA. *Biopolymers* **26(1)**, 121-135 (1987).
3. Intaraudom, C., Bunbamrung, N., Dramaee, A., *et al.* Antimalarial and antimycobacterial agents from *Streptomyces* sp. BCC27095. *Tetrahedron Lett.* **56(49)**, 6875-6877 (2015).

#### 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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