

# PRODUCT INFORMATION



## β-Rubromycin

Item No. 27477

**CAS Registry No.:** 27267-70-5  
**Formal Name:** (2S)-4,4',9,9'-tetrahydro-8',10-dihydroxy-5',7'-dimethoxy-4',9,9'-trioxo-spiro[benzo[1,2-b:5,4-c']dipyran-2(3H),2'(3'H)-naphtho[2,3-b]furan]-7-carboxylic acid, methyl ester

**MF:** C<sub>27</sub>H<sub>20</sub>O<sub>12</sub>

**FW:** 536.4

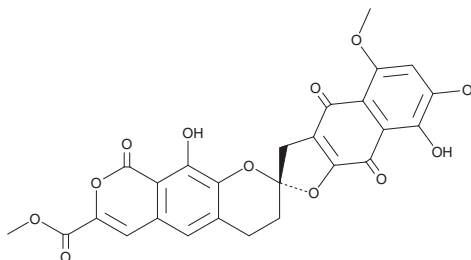
**Purity:** ≥95%

**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥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

β-Rubromycin is supplied as a solid. A stock solution may be made by dissolving the β-rubromycin in the solvent of choice. β-Rubromycin is soluble in the organic solvent DMSO, which should be purged with an inert gas, at a concentration of approximately 1 mg/ml.

### Description

β-Rubromycin is a bacterial metabolite originally isolated from *Streptomyces* that has diverse biological activities.<sup>1</sup> It inhibits the growth of HMO2, KATO-III, and MCF-7 cells with GI<sub>50</sub> values of 0.5, 0.84, and <0.1 μM, respectively. β-rubromycin inhibits HIV-1 reverse transcriptase activity by 39.7% when used at a concentration of 10 μM. It also has antibacterial activity against Gram-positive bacteria. The structure of β-rubromycin was originally described as containing an *ortho*-quinone group, but it was revised to a *para*-quinone group in 2000 using organic and biosynthetic methods, as well as spectroscopic analysis.<sup>1-3</sup>

### References

1. Puder, C., Loya, S., Hizi, A., *et al.* Structural and biosynthetic investigations of the rubromycins. *Eur. J. Org. Chem.* **2000(5)**, 729-735 (2000).
2. Ueno, T., Takahashi, H., Oda, M., *et al.* Inhibition of human telomerase by rubromycins: Implication of spiroketal system of the compounds as an active moiety. *Biochemistry* **39(20)**, 5995-6002 (2000).
3. Goldman, M.E., Salituro, G.S., Bowen, J.A., *et al.* Inhibition of human immunodeficiency virus-1 reverse transcriptase activity by rubromycins: Competitive interaction at the template-primer site. *Mol. Pharmacol.* **38(1)**, 20-25 (1990).

#### 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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