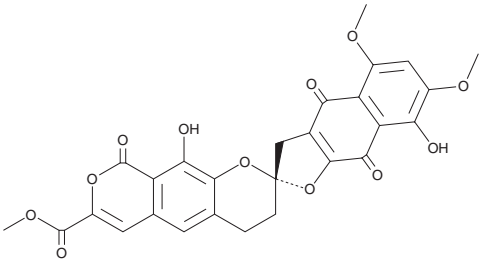
PRODUCT INFORMATION

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: $C_{27}H_{20}O_{12}$
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 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.[1] It inhibits the growth of HMO2, KATO-III, and MCF-7 cells with GI_{50} 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.[1-3]

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).

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