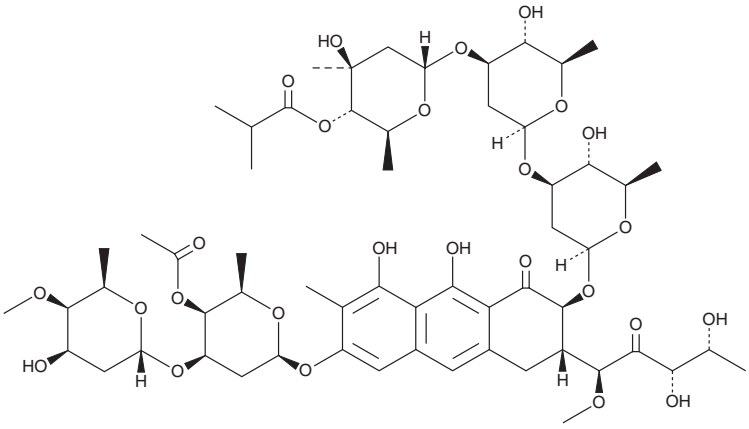
PRODUCT INFORMATION

Chromomycin A_2

Item No. 26954

CAS Registry No.: 6992-70-7
Formal Name: (1S)-1-C-[(2S,3S)-7-[[4-O-acetyl-2,6-dideoxy-3-O-(2,6-dideoxy-4-O-methyl-α-D-lyxo-hexopyranosyl)-β-D-lyxo-hexopyranosyl]oxy]-3-[[O-2,6-dideoxy-3-C-methyl-4-O-(2-methyl-1-oxopropyl)-α-L-arabino-hexopyranosyl(1→3)-O-2,6-dideoxy-β-D-arabino-hexopyranosyl-(1→3)-2,6-dideoxy-β-D-arabino-hexopyranosyl]oxy]-1,2,3,4-tetrahydro-5,10-dihydroxy-6-methyl-4-oxo-2-anthracenyl]-5-deoxy-1-O-methyl-D-*threo*-2-pentulose
Synonyms: Aburamycin A, CMA_2, NSC 131187
MF: $C_{59}H_{86}O_{26}$
FW: 1,211.3
Purity: ≥98%
Supplied as: A powder
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

Chromomycin A_2 is supplied as a powder. A stock solution may be made by dissolving the chromomycin A_2 in the solvent of choice, which should be purged with an inert gas. Chromomycin A_2 is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

Description

Chromomycin A_2 is an aureolic acid that has been found in several marine actinomycetes and has antibacterial and anticancer activities.[1,2] Chromomycin A_2 inhibits the growth of *B. subtilis* in an agar diffusion assay.[1] It also inhibits the growth of human SGC7901 gastric cancer, HepG2 hepatocellular carcinoma, A549 lung epithelial adenocarcinoma, HCT116 colon cancer, and COC1 ovarian cancer cells, as well as human umbilical vein endothelial cells (HUVECs; IC_{50}s = 4, 0.5, 3, 5, 5, and 8 nM, respectively).[2] Chromomycin A_2 (30 nM) halts the cell cycle in the G_0/G_1 phase and increases the protein levels of LC3A and LC3B in MALME-3M melanoma cells, indicating that it induces autophagy.[3] It also increases the levels and promoter activity of the autophagic proteins ATG7 and ATG10 and reduces cell viability to 50% in human SCC-11 squamous cell carcinoma cells when used at a concentration of 30 nM.[4]

References

1. Yoshimoto, A., Oki, T., and Inui, T. *J. Antibiot. (Tokyo)* **31(1)**, 92-94 (1978).
2. Lu, J., Ma, Y., Liang, J., *et al. Microbiol. Res.* **167(10)**, 590-595 (2012).
3. Guimarães, L.A., Jimenez, P.C., da Silva Sousa, T., *et al. Mar. Drugs* **12(12)**, 5839-5855 (2014).
4. Ratovitski, E.A. *Mar. Drugs* **14(8)**, E154 (2016).

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