

Product Data Sheet

Product Name: Spiramycin

Cat. No.: GC18047

Chemical Properties

Cas. No. 8025-81-8

SMILES CC1CC=CC=CC(C(CC(C(C(C(CC(=O)O1)O)OC)OC2C(C(C(C(O2)C)OC3CC(C(C(O3)C)O)(C)O)N(C)C)O)CC=O)C)OC4CCC(C(O4)C)N(C)C

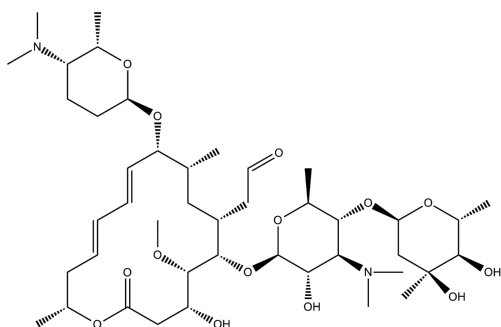
Formula $C_{43}H_{74}N_2O_{14}$ M.Wt 843.058

Solubility $\geq 31.25\text{mg/mL}$ in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Spiramycin (Rovamycin) is a macrolide antibiotic produced by *Streptomyces ambofaciens* with against bacteria and *Toxoplasma gondii* activities, and also has antiparasitic effect. Spiramycin is composed of a 16-member lactone ring, on which three sugars (mycaminose, forosamine, and mycarose) are attached[1][2].

Spiramycin (24 hours; 1-1000 μM ; *T. gondii* infected HeLa cells and HeLa cells) treatment reduces the cytotoxicity, and shows anti-*Toxoplasma gondii* activity, with IC_{50} values of 189 μM for HeLa cells; and 262 μM for *T. gondii*-infected HeLa cells[3].

Spiramycin (100 mg/kg; intraperitoneal injection; every day; for 4 days; female KM mice) treatment

Caution: Product has not been fully validated for medical applications. For research use only.

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reduces the number of tachyzoites, and reduces hepatotoxicity and significantly enhances antioxidative effects. Spiramycin treatment also decreases in the degree of granulomatous inflammation in the liver[3].

References:

- [1]. Nguyen HC, et al. Post-PKS tailoring steps of the spiramycin macrolactone ring in *Streptomyces ambofaciens*. *Antimicrob Agents Chemother*. 2013 Aug;57(8):3836-42.
- [2]. Etewa SE, et al. Assessment of spiramycin-loaded chitosan nanoparticles treatment on acute and chronic toxoplasmosis in mice. *J Parasit Dis*. 2018 Mar;42(1):102-113.
- [3]. Guo HY, et al. Synthesis and Biological Evaluation of (+)-Usnic Acid Derivatives as Potential Anti-*Toxoplasma gondii* Agents. *J Agric Food Chem*. 2019 Aug 28;67(34):9630-9642.

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