

**Product Name:** Quinupristin Mesylate

**Product Number:** Q008

**CAS Number:** 120138-50-3

**Molecular Formula:**  $C_{54}H_{71}N_9O_{13}S_2$

**Molecular Weight:** 1118.3

**Appearance:** White to fawn solid

**Storage Conditions:** -20°C

**Description:** Quinupristin is a semi-synthetic analogue of virginiamycin B (ostreogrycin B, pristinamycin IA, streptogramin B) formed by a Mannich condensation and elimination to generate an exocyclic methylene alpha to the ketone of the 4-piperidinone. Addition of quinucidinylthiol to the methylene group affords quinupristin. The structural changes provide a more hydrophobic compound with a readily ionisable group for generating a salt. Quinupristin is used commercially in synergistic combination with dalfopristin (30:70). There is little published data on the synthesis, biological or antibiotic activity of quinupristin alone, however the combination product is highly effective, including activity against antibiotic resistant strains.

Quinupristin is soluble in ethanol, methanol, DMF and DMSO.

**References:** Quinupristin/dalfopristin (RP 59500): A new streptogramin antibiotic. Chant C. et al. Ann. Pharm. 1995, 29,1022.

Quinupristin/dalfopristin: spectrum of activity, pharmacokinetics, and initial chemical experience. Low D. et al. Microb. Drug Resist, 1995, 1, 223.

Quinupristin/dalfopristin: a therapeutic review. Allington D.R. & Rivey M.P. Clin. Ther. 2001, 23, 24.

Quinupristin/dalfopristin (RP 59500): A new streptogramin antibiotic. Chant C. et al. Ann. Pharm. 1995, 29,1022.