PRODUCT INFORMATION

Milbemycin A₄ oxime
Item No. 27938

CAS Registry No.: 93074-04-5
Formal Name: (6R,25R)-5-demethoxy-28-deoxy-6,28-epoxy-25-ethyl-5-(hydroxyimino)-milbemycin B
Synonyms: 5-Ketomilbemycin A₄ oxime, 5-Oxomilbemycin A₄ 5-oxime
MF: C₃₂H₄₅NO₇
FW: 555.7
Purity: ≥99%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Milbemycin A₄ oxime is supplied as a solid. A stock solution may be made by dissolving the milbemycin A₄ oxime in the solvent of choice, which should be purged with an inert gas. Milbemycin A₄ oxime is soluble in ethanol, methanol, DMSO, and dimethyl formamide.

Description

Milbemycin A₄ oxime is a derivative of milbemycin A₄ (Item No. 17155) and a component of milbemycin oxime (Item No. 17164), compounds that both have insecticidal and nematocidal activity.¹⁻² Milbemycin A₄ oxime (0.05 mg/kg) reduces the number of microfilariae of the heartworm D. immitis in naturally infested dogs.³ It inhibits the growth of clinical isolates of C. glabrata with MIC₈₀ values ranging from 16 to greater than 32 μg/ml.¹ Milbemycin A₄ oxime (2.5 μg/ml) blocks efflux of fluconazole (Item No. 11594) from a clinical isolate of C. glabrata, but not from a strain lacking the efflux pumps CgCDR1 and PDH1, and reduces the MICs of fluconazole and 4-nitroquinoline 1-oxide in wild-type C. glabrata. It enhances adriamycin-induced inhibition of cell growth, as well as increases the intracellular accumulation of adriamycin and the P-glycoprotein substrate rhodamine 123 (Item No. 16672), in adriamycin-resistant, but not -sensitive, MCF-7 breast cancer cells in a concentration-dependent manner.⁴

References