Product Name: Marbofloxacin

Product Number: M014

CAS Number: 115550-35-1

Molecular Formula: C₁₇H₁₉FN₄O₄

Molecular Weight: 362.36

Form: Powder

Appearance: Light yellow crystalline powder

Solubility: Water: Soluble

Source: Synthetic

Melting Point: 268-269°C

Storage Conditions: 2-8°C

Description: Marbofloxacin is broad-spectrum, third-generation fluoroquinolone antibiotic and is freely soluble in aqueous solution. It is commonly used in studying antimicrobial resistance and antimicrobial susceptibility testing.

Mechanism of Action: Fluoroquinolone antibiotics target bacterial DNA gyrase, an enzyme which reduces DNA strain during replication. DNA gyrase is required during DNA replication, thus causes an inhibition of DNA synthesis and cell division.

Spectrum: Marbofloxacin is a broad-spectrum antibiotic active against Gram-positive and Gram-negative bacteria including Pseudomonas and Staphylococci species. It is also active against Mycoplasma.

Microbiology Applications: Marbofloxacin is commonly used for in vitro microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against Gram-positive and Gram-negative microbial isolates. Medical microbiologists use AST results to recommend antibiotic treatment options. Representative MIC values include:

- *Pseudomonas aeruginosa* 0.5 µg/mL
- *Staphylococcus aureus* 0.25 µg/mL

For a representative list of Marbofloxacin MIC values, [click here](#). The in vitro activity of Marbofloxacin, a quinolone, was evaluated on 124 anaerobic human strains isolated from the gut and testing revealed that Marbofloxacin was similar or superior to Ofloxacin for the whole anaerobes such as *Enterococcus, Enterobacteriaceae*, and *Lactobacillus* (Dubreuil et al, 1996).
References:


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