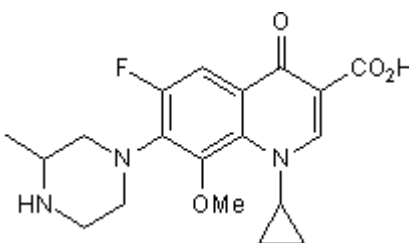


Certificate of Analysis

Product Name: Gatifloxacin **Catalog No.:** 3849 **Batch No.:** 1
CAS Number: 112811-59-3
IUPAC Name: 1-Cyclopropyl-6-fluoro-1,4-dihydro-8-methoxy-7-(3-methyl-1-piperazinyl)-4-oxo-3-quinolinecarboxylic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{19}H_{22}FN_3O_4 \cdot 1\frac{1}{4}H_2O$
Batch Molecular Weight: 397.91
Physical Appearance: White solid
Solubility: DMSO to 10 mM with gentle warming
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.9% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	57.35	6.21	10.56
Found	57.47	6.05	10.63

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Fluoroquinolone antibiotic. Inhibits bacterial type II topoisomerases (IC₅₀ values are 0.109 and 13.8 µg/ml for E.coli DNA gyrase and S.aureus topoisomerase IV respectively). Displays potent activity against gram-positive and gram-negative bacteria. Stimulates short-term self-renewal in both human and mouse embryonic stem cells in vitro.

Physical and Chemical Properties:

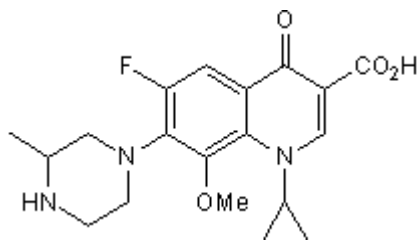
Batch Molecular Formula: C₁₉H₂₂FN₃O₄.1 ¼H₂O

Batch Molecular Weight: 397.91

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 10 mM with gentle warming

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Takei et al (1998) Inhibitory activities of gatifloxacin (AM-1155), a newly developed fluoroquinolone, against bacterial and mammalian type II topoisomerases. *Antimicrob.Agents Chemother.* **42** 2678. PMID: 9756776.

Fukuda et al (1998) Antibacterial activity of gatifloxacin (AM-1155, CG5501, BMS-206584), a newly developed fluoroquinolone, against sequentially acquired quinolone-resistant mutants and the *norA* transformant of *Staphylococcus aureus*. *Antimicrob.Agents Chemother.* **42** 1917. PMID: 9687384.

Desbordes et al (2008) High throughput screening assay for the identification of compounds regulating self-renewal and differentiation in human embryonic stem cells. *Cell Stem Cell* **2** 602. PMID: 18522853.

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