

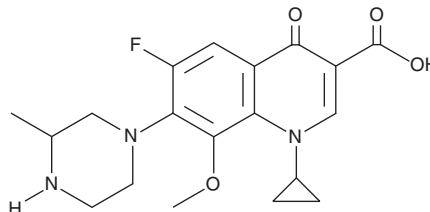
# PRODUCT INFORMATION



## Gatifloxacin

Item No. 14290

**CAS Registry No.:** 112811-59-3  
**Formal Name:** 1-cyclopropyl-6-fluoro-1,4-dihydro-8-methoxy-7-(3-methyl-1-piperazinyl)-4-oxo-3-quinolinecarboxylic acid  
**Synonyms:** AM1155, BMS 206584-01, PD 135432  
**MF:** C<sub>19</sub>H<sub>22</sub>FN<sub>3</sub>O<sub>4</sub>  
**FW:** 375.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 216, 234, 297, 325, 334 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Gatifloxacin is supplied as a crystalline solid. A stock solution may be made by dissolving the gatifloxacin in the solvent of choice, which should be purged with an inert gas. Gatifloxacin is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of gatifloxacin in these solvents is approximately 1 and 10 mg/ml, respectively.

Gatifloxacin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, gatifloxacin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Gatifloxacin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Gatifloxacin is a fluoroquinolone antibiotic which inhibits bacterial DNA gyrase (IC<sub>50</sub> = 0.109 µg/ml) and topoisomerase IV (IC<sub>50</sub> = 13.8 µg/ml).<sup>1</sup> It is much less effective against HeLa cell topoisomerase II (IC<sub>50</sub> = 265 µg/ml).<sup>1</sup> Gatifloxacin has been used as a broad-spectrum oral antibiotic, but it can produce dysglycemia in older adults.<sup>2</sup> It remains useful for resolving bacterial conjunctivitis.<sup>3</sup>

### References

1. Takei, M., Fukuda, H., Yasue, T., *et al.* Inhibitory activities of gatifloxacin (AM-1155), a newly developed fluoroquinolone, against bacterial and mammalian type II topoisomerases. *Antimicrob. Agents Chemother.* **42(10)**, 2678-2681 (1998).
2. Park-Wyllie, L.Y., Juurlink, D.N., Kopp, A., *et al.* Outpatient gatifloxacin therapy and dysglycemia in older adults. *N. Engl. J. Med.* **354(13)**, 1352-1361 (2006).
3. Cervantes, L.J. and Mah, F.S. Clinical use of gatifloxacin ophthalmic solution for treatment of bacterial conjunctivitis. *Clin. Ophthalmol.* **5(1)**, 495-502 (2011).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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