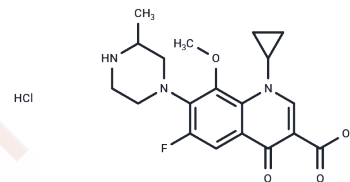


## Gatifloxacin hydrochloride

## Chemical Properties

CAS No. :	121577-32-0
Formula:	C <sub>19</sub> H <sub>23</sub> ClFN <sub>3</sub> O <sub>4</sub>
Molecular Weight:	411.86
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Gatifloxacin hydrochloride (AM-1155 hydrochloride) is a fourth-generation fluoroquinolone antibiotic that inhibits bacterial DNA gyrase and topoisomerase IV.
Targets(IC50)	Antibacterial, Antibiotic, Topoisomerase
In vivo	All eyes showed evidence of infection by 48 hours postinoculation with 36 of 41 eyes (87.8%) exhibiting moderate-to-severe keratitis. All eyes exhibited corneal healing by day 15, with no significant differences among groups. Three of 4 groups receiving gatifloxacin tended to have smaller fluorescein retention area scores than did the ciprofloxacin group. No eyes tested positive for Pseudomonas at the end of the study. No corneal precipitates were found following as many as 48 doses/day of gatifloxacin [1].
Animal Research	Heptanol-induced corneal ulcers in New Zealand White rabbits (n = 41; 8 females/group) were inoculated with 10(6) CFU of Pseudomonas aeruginosa. Gatifloxacin 0.3% dosing varied among 4 groups with frequencies of 16-48 doses/day (days 1-2), 3-16 doses/day (days 3-7), and maintenance dosing of 3-4 doses/day (days 8-22). Ciprofloxacin 0.3% was administered as labeled for corneal ulcers, with 44 doses on day 1, 16 doses on day 2, and 4 doses/day on days 3-21[1]

## Solubility Information

Solubility	H <sub>2</sub> O: 10 mg/mL (24.28 mM), Sonication is recommended. DMSO: 4.12 mg/mL (10 mM), Sonication is recommended. ( < 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.428 mL	12.140 mL	24.2801 mL
5 mM	0.4856 mL	2.428 mL	4.856 mL
10 mM	0.2428 mL	1.214 mL	2.428 mL
50 mM	0.0486 mL	0.2428 mL	0.4856 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Jensen, H., et al., Comparison of ophthalmic gatifloxacin 0.3% and ciprofloxacin 0.3% in healing of corneal ulcers associated with *Pseudomonas aeruginosa*-induced ulcerative keratitis in rabbits. *J Ocul Pharmacol Ther*, 2005. 21 (1): p. 36-43.

Fukuda, H., S. Hori, and K. Hiramatsu, 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*, 1998. 42(8): p. 1917-22.

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