Small Molecules

Gatifloxacin

Antibiotic; Inhibits bacterial DNA gyrase and topoisomerase IV

Catalog # 72752

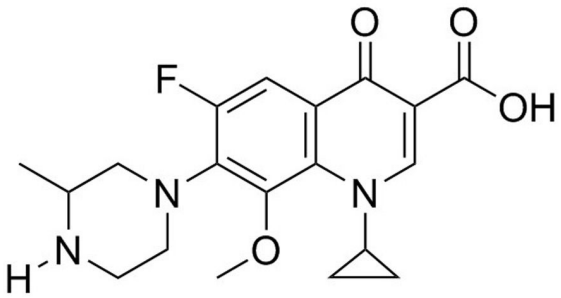
1 g

STEMCELL™ TECHNOLOGIES
Scientists Helping Scientists™ | WWW.STEMCELL.COM
TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM
FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Product Description

Gatifloxacin is a fluoroquinolone antibiotic that inhibits bacterial DNA gyrase (IC_{50} = 0.109 µg/mL) and topoisomerase IV (IC_{50} = 13.8 µg/mL; Takei et al.). It is much less effective against HeLa cell topoisomerase II (IC_{50} = 265 µg/mL; Takei et al.).

Molecular Name:	Gatifloxacin
Alternative Names:	AM 1155; BMS 206584-01; PD 135432
CAS Number:	112811-59-3
Chemical Formula:	$C_{19}H_{22}FN_3O_4$
Molecular Weight:	375.4 g/mol
Purity:	≥ 98%
Chemical Name:	1-Cyclopropyl-6-fluoro-8-methoxy-7-(3-methylpiperazin-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylic acid
Structure:	



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect from prolonged exposure to light. Stable as supplied for 12 months from date of receipt.
Solubility:	· Absolute ethanol ≤ 20 mM · DMSO ≤ 45 mM For example, to prepare a 20 mM stock solution in DMSO, resuspend 1 mg in 225 µL of fresh DMSO. Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application. Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

MAINTENANCE AND SELF-RENEWAL
· Promotes self-renewal in cultured human and mouse embryonic stem cells (Desbordes et al.).

References

Desbordes SC 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(6): 602–12.
Takei M et al. (1998) Inhibitory activities of gatifloxacin (AM-1155), a newly developed fluoroquinolone, against bacterial and mammalian type II topoisomerases. Antimicrob Agents Chemother 42(10): 2678–81.

Related Small Molecules

For a complete list of small molecules available from STEMCELL Technologies, visit www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

This product is hazardous. Please refer to the Safety Data Sheet (SDS).