
Product Data Sheet

Product Name: Levonadifloxacin

Cat. No.: GC67773

Chemical Properties

Cas. No. 154357-42-3

Formula $C_{19}H_{21}FN_2O_4$

M.Wt 360.38

Solubility DMSO : 125 mg/mL (346.86 mM; Need ultrasonic) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Background

Levonadifloxacin ((S)-(-)-Nadifloxacin; WCK 771) is a broad-spectrum anti-staphylococcal agent. Levonadifloxacin shows antibacterial activity against Methicillin -susceptible *Staphylococcus aureus* (MSSA) and Methicillin-resistant *S. aureus* (MRSA) strains, with a reduction of which phagocytized in THP-1 monocytes^[1].

Levonadifloxacin (32 µg/mL; 24 h) achieves a 90-99% intracellular reduction of MSSA and MRSA strains phagocytized in THP-1 monocytes with MICs of 0.03 µg/mL and 15.0 ng/mL^[1].

Levonadifloxacin (12.5-400 mg/kg; s.c.; single dose) shows efficacy in vivo against *Staphylococcus aureus* in a Neutropenic Murine Lung Infection Model^[2].

Animal Model: Male/Female Swiss Albino mice (25-28 g) for plasma pharmacokinetic analyses^[2]

Dosage: 12.5, 25, 50, 100, 200, 300 and 400 mg/kg

Caution: Product has not been fully validated for medical applications. For research use only.

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Administration: Subcutaneous injection; single dose; collected samples at 10 time points/dose (0.25, 0.5, 1, 2, 4, 6, 8, 10, 58 12 and 24 h post dose)

	Dose (mg/kg)	C _{max} (mg/L)	AUC _{0-24 h} (mg.h/L)	T _{1/2} (h)
Result:	12.5	4.37	7.30	1.79
	25	8.71	15.75	1.48
	50	19.21	33.36	1.48
	100	38.65	70.86	1.76
	200	77.29	145.48	1.69
	300	92.46	286.19	2.44
	400	115.16	393.52	1.74

[1]. Dubois J, et al. Levonadifloxacin (WCK 771) exerts potent intracellular activity against *Staphylococcus aureus* in THP-1 monocytes at clinically relevant concentrations. *J Med Microbiol.* 2019 Dec;68(12):1716-1722.

[2]. Bhagwat SS, et al. In Vivo Pharmacokinetic/Pharmacodynamic Targets of Levonadifloxacin against *Staphylococcus aureus* in a Neutropenic Murine Lung Infection Model. *Antimicrob Agents Chemother.* 2019 Jul 25;63(8):e00909-19.

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