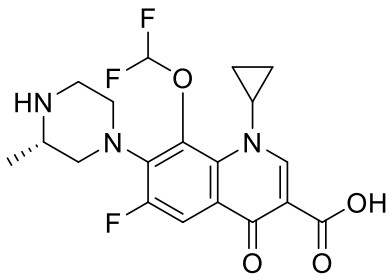
Product data sheet

MedKoo Cat#: 326632 Name: Cadrofloxacin CAS#: 153808-85-6 (free base) Chemical Formula: $C_{19}H_{20}F_3N_3O_4$ Exact Mass: 411.1406 Molecular Weight: 411.3812	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
Cadrofloxacin, also known as Caderofloxacin and CS-940, is a novel fluoroquinolone antibacterial. The activities of CS-940 against gram-positive cocci and gram-negative rods, including methicillin-susceptible Staphylococcus aureus and penicillin-resistant Streptococcus pneumoniae, were comparable to those of tosufloxacin, with MICs at which 90% of the strains were inhibited (MIC90s) of 0.5 microg/ml or less.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	10.0	24.31

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.43 mL	12.15 mL	24.31 mL
5 mM	0.49 mL	2.43 mL	4.86 mL
10 mM	0.24 mL	1.22 mL	2.43 mL
50 mM	0.05 mL	0.24 mL	0.49 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Biedenbach DJ, Sutton LD, Jones RN. Antimicrobial activity of CS-940, a new trifluorinated quinolone. Antimicrob Agents Chemother. 1995 Oct;39(10):2325-30. doi: 10.1128/AAC.39.10.2325. PMID: 8619590; PMCID: PMC162937.
2. Miyazaki S, Domon H, Tateda K, Ohno A, Ishii Y, Matsumoto T, Furuya N, Yamaguchi K. In vitro and in vivo antibacterial activities of CS-940, a new fluoroquinolone, against isolates from patients with respiratory infections. Antimicrob Agents Chemother. 1997 Nov;41(11):2582-5. doi: 10.1128/AAC.41.11.2582. PMID: 9371375; PMCID: PMC164170.

In vivo study

1. Biedenbach DJ, Sutton LD, Jones RN. Antimicrobial activity of CS-940, a new trifluorinated quinolone. Antimicrob Agents Chemother. 1995 Oct;39(10):2325-30. doi: 10.1128/AAC.39.10.2325. PMID: 8619590; PMCID: PMC162937.
2. Masuda N, Takahashi Y, Otsuki M, Ibuki E, Miyoshi H, Nishino T. In vitro and in vivo antibacterial activities of CS-940, a new 6-fluoro-8-difluoromethoxy quinolone. Antimicrob Agents Chemother. 1996 May;40(5):1201-7. doi: 10.1128/AAC.40.5.1201. PMID: 8723467; PMCID: PMC163292.

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7. Bioactivity

Biological target:

Cadrofloxacin (Caderofloxacin; CS-940), an active fluoroquinolone, is effective against aerobic/anaerobic Gram-positive and Gram-negative bacteria.

In vitro activity

The in vitro activities of CS-940, a new fluoroquinolone, were compared with those of a group of other drugs. The activities of CS-940 against gram-positive cocci and gram-negative rods, including methicillin-susceptible Staphylococcus aureus and penicillin-resistant Streptococcus pneumoniae, were comparable to those of tosufloxacin, with MICs at which 90% of the strains were inhibited (MIC90s) of 0.5 microg/ml or less. Against methicillin-resistant S. aureus, CS-940 was as active as tosufloxacin, with a MIC90 of 16 microg/ml.

Reference: Antimicrob Agents Chemother. 1997 Nov;41(11):2582-5. https://pubmed.ncbi.nlm.nih.gov/9371375/

In vivo activity

The in vivo activities of CS-940, a new 6-fluoro-8-difluoromethoxy quinolone, were compared with those of ciprofloxacin, tosufloxacin, sparfloxacin, and levofloxacin. CS-940 showed potent bactericidal activity against S. aureus, Escherichia coli, Klebsiella pneumoniae, and Pseudomonas aeruginosa. In oral treatment of mouse systemic infections caused by S. aureus, Streptococcus pneumoniae, Streptococcus pyogenes, E. coli, K. pneumoniae, Serratia marcescens, and P. aeruginosa, CS-940 was more effective than ciprofloxacin, sparfloxacin, and levofloxacin against all strains tested. Against experimental pneumonia with K. pneumoniae in mice, CS-940 was the most effective of all the quinolones tested. These results suggest that CS-940 may be effective in the therapy of various bacterial infections.

Reference: Antimicrob Agents Chemother. 1996 May;40(5):1201-7. https://pubmed.ncbi.nlm.nih.gov/8723467/