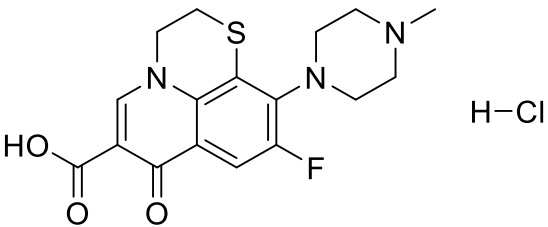


# Product data sheet



MedKoo Cat#: 561626 Name: Rufloxacin HCl CAS#: 106017-08-7 Chemical Formula: C <sub>17</sub> H <sub>19</sub> ClFN <sub>3</sub> O <sub>3</sub> S Molecular Weight: 399.86		
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:

Rufloxacin HCl is a quinolone antibiotic and antibacterial. It inhibits B-cell differentiation in human mononuclear cells and acts as an inhibitor of Topo.

## 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	0.09	0.21
Water	2	5.00

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.50 mL	12.50 mL	25.01 mL
5 mM	0.50 mL	2.50 mL	5.00 mL
10 mM	0.25 mL	1.25 mL	2.50 mL
50 mM	0.05 mL	0.25 mL	0.50 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

- Mulgaonkar A, Venitz J, Gründemann D, Sweet DH. Human organic cation transporters 1 (SLC22A1), 2 (SLC22A2), and 3 (SLC22A3) as disposition pathways for fluoroquinolone antimicrobials. *Antimicrob Agents Chemother.* 2013 Jun;57(6):2705-11. doi: 10.1128/AAC.02289-12. Epub 2013 Apr 1. PMID: 23545524; PMCID: PMC3716151.
- Pessina A, Gribaldo L, Mineo E, Neri MG. In vitro short-term and long-term cytotoxicity of fluoroquinolones on murine cell lines. *Indian J Exp Biol.* 1994 Feb;32(2):113-8. PMID: 8045610.

### In vivo study

- Cuffini AM, Tullio V, Allocco A, Paizis G, De Leo C, Carlone NA. Effect of rufloxacin upon non-specific immune defences: in-vitro, ex-vivo and in-vivo results. *J Antimicrob Chemother.* 1994 Oct;34(4):545-53. doi: 10.1093/jac/34.4.545. PMID: 7868406.
- Bonina L, Carbone M, Mastroeni P, Costa GB, Mastroeni P. Effects of rufloxacin in *Salmonella typhimurium* infection in mice. *J Chemother.* 1992 Dec;4(6):353-7. doi: 10.1080/1120009x.1992.11739191. PMID: 1337552.

## 7. Bioactivity

### Biological target:

Rufloxacin is active against *S. aureus*, *E. coli*, *P. aeruginosa*, *P. morganii*, *K. pneumoniae*, and *E. cloacae* in vitro (MICs = 0.78, 0.78, 12.5, 1.56, <0.39, and <0.39 µg/ml, respectively). Rufloxacin inhibits *M. luteus* DNA gyrase with an IC<sub>50</sub> value of 1.5 mM and

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inhibits DNA synthesis in *S. aureus*, *E. coli*, *P. aeruginosa*, *K. pneumoniae*, and *E. cloacae* (IC50s = 0.93, 1.03, 38.8, 0.55, and 0.66 µg/ml, respectively).

## In vitro activity

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Rufloxacin significantly inhibited hOCT1-mediated uptake under initial test conditions but did not inhibit hOCT2.

Reference: Antimicrob Agents Chemother. 2013 Jun;57(6):2705-11. <https://pubmed.ncbi.nlm.nih.gov/23545524/>

## In vivo activity

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Rufloxacin is very effective on both mouse strains, but can completely eradicate the salmonellae from livers and spleens when given early in the infection of CBA resistant mice.

Reference: J Chemother. 1992 Dec;4(6):353-7. <https://pubmed.ncbi.nlm.nih.gov/1337552/>

*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*