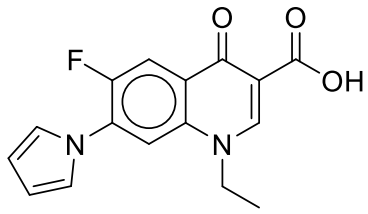
Product data sheet

MedKoo Cat#: 576764 Name: Irloxacin CAS#: 91524-15-1 (free acid) Chemical Formula: $C_{16}H_{13}FN_2O_3$ Exact Mass: 300.091 Molecular Weight: 300.29	
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:
Irloxacin is a new quinolone derivative that shows greater activity with an acidic pH. It has a good in vitro antimicrobial spectrum against both gram-positive and gram-negative bacteria. In vitro activity of irloxacin against mycobacteria (20 M. tuberculosis, 17 M. avium, 5 Mycobacterium bovis, 5 Mycobacterium chelonae, 5 Mycobacterium fortuitum and 1 Mycobacterium gadium) using the Bactec at pH 6.8 and 5.0, with other quinolones (ofloxacin, ciprofloxacin, pefloxacin and 27753 RP) were compared. All quinolones tested showed good activity against mycobacteria at pH 6.8 and 5.0. Irloxacin at pH 5.0 had a greater activity against M. avium.

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	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	3.33 mL	16.65 mL	33.30 mL
5 mM	0.67 mL	3.33 mL	6.66 mL
10 mM	0.33 mL	1.67 mL	3.33 mL
50 mM	0.07 mL	0.33 mL	0.67 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

TBD

In vivo study

1. Guzmán A, García C, Marín AP, Willoughby C, Demestre I. Developmental toxicity studies of the quinolone antibacterial agent irloxacin in rats and rabbits. Arzneimittelforschung. 2003;53(2):121-5. doi: 10.1055/s-0031-1297082. PMID: 12642968.
2. Guzmán A, García C, Demestre I. Subchronic toxicity of the new quinolone antibacterial agent irloxacin in beagle dogs. Arzneimittelforschung. 2000 May;50(5):485-94. doi: 10.1055/s-0031-1300234. PMID: 10858877.

7. Bioactivity
Biological target:

Irloxacin (Pirfloxacin) is a quinolone antibacterial agent that shows greater activity with an acidic pH and has a good in vitro antimicrobial spectrum against both gram-positive and gram-negative bacteria.

Product data sheet

In vitro activity

TBD

In vivo activity

Embryotoxicity studies on irloxacin (6-fluorine-7-(pyrrol-1-yl)-1-ethyl-1,4-dihydro-4-oxo-quinolone-3-carboxylic acid, CAS-91524-15-1), a new fluoroquinolone antibacterial agent, were performed in rats and rabbits. Oral administration of irloxacin during the fetal period of organogenesis to pregnant rats and rabbits at dose levels of up to 1000 and 350 mg/kg/d, respectively, elicited no evidence of teratogenicity. During the first days of treatment, transient stasis in body weight increase was observed in rat dams receiving doses of 350 or 1000 mg/kg/d, and reduced food consumption was observed in those receiving 1000 mg/kg/d. Necropsy on day 20 of gestation showed dosage related increase in liver and kidney weights in all rat treated groups. Rabbit dams receiving 350 mg/kg/d showed during the first days of treatment decrease in body weight, and decreased food consumption and faecal output. Also, four females receiving 350 mg/kg/d aborted between days 18 and 20 of gestation. Rat fetuses in the 350 and 1000 mg/kg/d showed decreased body weight, and a decrease in placental weights was observed in the 1000 mg/kg/d group. No retardations or malformations were observed in rat or rabbit fetuses at any tested dose level.

Reference: Arzneimittelforschung. 2003;53(2):121-5. https://pubmed.ncbi.nlm.nih.gov/12642968/