

Product data sheet



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| MedKoo Cat#: 529012 Name: Levonadifloxacin free base CAS: 154357-42-3 (free base) Chemical Formula: C ₁₉ H ₂₁ FN ₂ O ₄ Exact Mass: 360.1485 Molecular Weight: 360.3854 | | |
| 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:

Levonadifloxacin is a broad-spectrum fluoroquinolone antibiotic potentially for the treatment of staphylococci.

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 | 125.0 | 346.85 |

4. Stock solution preparation table:

| Concentration / Solvent Volume / Mass | 1 mg | 5 mg | 10 mg |
|---------------------------------------|---------|----------|----------|
| 1 mM | 2.77 mL | 13.87 mL | 27.75 mL |
| 5 mM | 0.56 mL | 2.77 mL | 5.55 mL |
| 10 mM | 0.28 mL | 1.39 mL | 2.77 mL |
| 50 mM | 0.06 mL | 0.28 mL | 0.56 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. Mamtara D, Saseedharan S, Rampal R, Joshi P, Bhalekar P, Ahdal J, Jain R. In Vitro activity of a Novel Benzoquinolizine Antibiotic, Levonadifloxacin (WCK 771) against Blood Stream Gram-Positive Isolates from a Tertiary Care Hospital. *J Lab Physicians*. 2020 Dec;12(3):230-232. doi: 10.1055/s-0040-1720944. Epub 2020 Nov 23. PMID: 33268943; PMCID: PMC7684988.

2. Baliga S, Mamtara DK, Gupta V, Shanmugam P, Biswas S, Mukherjee DN, Shenoy S. Assessment of antibacterial activity of levonadifloxacin against contemporary gram-positive clinical isolates collected from various Indian hospitals using disk-diffusion assay. *Indian J Med Microbiol*. 2020 Jul-Dec;38(3 & 4):307-312. doi: 10.4103/ijmm.IJMM_20_307. PMID: 33154240.

In vivo study

1. Patel A, Sangle GV, Trivedi J, Shengule SA, Thorve D, Patil M, Deshmukh NJ, Choudhari B, Karade A, Gupta S, Bhagwat S, Patel M. Levonadifloxacin, a Novel Benzoquinolizine Fluoroquinolone, Modulates Lipopolysaccharide-Induced Inflammatory Responses in Human Whole-Blood Assay and Murine Acute Lung Injury Model. *Antimicrob Agents Chemother*. 2020 Apr 21;64(5):e00084-20. doi: 10.1128/AAC.00084-20. PMID: 32152077; PMCID: PMC7179645.

2. Bhagwat SS, Periasamy H, Takalkar SS, Chavan R, Tayde P, Kulkarni A, Satav J, Zope V, Patel M. 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. doi: 10.1128/AAC.00909-19. PMID: 31208999; PMCID: PMC6658750.

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7. Bioactivity

Biological target:

Levonadifloxacin ((S)-(-)-Nadifloxacin; WCK 771) is a broad-spectrum anti-staphylococcal agent.

In vitro activity

Levonadifloxacin demonstrated potent activity against MRSA, QRSA, and MR-CoNS strains with significantly lower minimum inhibitory concentration MIC 50/90 values of 0.5/1 mg/L as compared with levofloxacin (8/32 mg/L) and moxifloxacin (2/8 mg/L).

Reference: J Lab Physicians. 2020 Dec;12(3):230-232. <https://pubmed.ncbi.nlm.nih.gov/33268943/>

In vivo activity

Fluoroquinolones are reported to possess immunomodulatory activity; hence, a novel benzoquinolizine fluoroquinolone, levonadifloxacin, was evaluated in lipopolysaccharide-stimulated human whole-blood (HWB) and mouse acute lung injury (ALI) models. Levonadifloxacin significantly mitigated the inflammatory responses in an HWB assay through inhibition of proinflammatory cytokines and in the ALI model by lowering lung total white blood cell count, myeloperoxidase, and cytokine levels.

Reference: Antimicrob Agents Chemother. 2020 Apr 21;64(5):e00084-20. <https://pubmed.ncbi.nlm.nih.gov/32152077/>

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.