Moxifloxacin

Cat. No.: HY-66011A
CAS No.: 151096-09-2
Molecular Formula: C₂₁H₂₄FN₃O₄
Molecular Weight: 401.43
Target: Bacterial; Antibiotic
Pathway: Anti-infection
Storage: Please store the product under the recommended conditions in the COA.

BIOLOGICAL ACTIVITY

**Description**
Moxifloxacin is an orally active 8-methoxyquinolone antimicrobial for use in the treatment of acute bacterial sinusitis, acute bacterial exacerbations of chronic bronchitis, and community-acquired pneumonia.[1][2]

**IC₅₀ & Target**
Bacterial[1]

**In Vitro**
The in vitro activities of Moxifloxacin and Amoxicillin are compared by time-kill curve and inhibition of intracellular growth experiments by using a model of bone marrow-derived mouse macrophages infected by L. monocytogenes EGDe. Moxifloxacin acts much more rapidly, beginning to exert its effects in the first 3 h and achieving complete broth sterilization within 24 h of incubation. Moxifloxacin appears to have a protective effect against macrophage lysis, as many cells are still viable after 24 h of incubation.[3]

**In Vivo**
Moxifloxacin (12 mg/kg; intravenous injection; once-three times per day; for 7 days; white male Wistar rats) treatment every 8 hours is accompanied by longer survival. Tissue cultures 30 hours after bacterial challenge shows considerably less bacterial overgrowth in the spleens and lungs of moxifloxacin-treated than in salinel-treated animals and without being toxic.[4]

<table>
<thead>
<tr>
<th>Animal Model:</th>
<th>144 white male Wistar rats (18-22 weeks; 300-400 g) infected Stenotrophomonas maltophilia[4]</th>
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</thead>
<tbody>
<tr>
<td>Dosage:</td>
<td>12 mg/kg</td>
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<tr>
<td>Administration:</td>
<td>Intravenous injection; once per day, twice per day, three times per day; for 7 days</td>
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<tr>
<td>Result:</td>
<td>Showed considerably less bacterial overgrowth in the spleens and lungs and without being toxic.</td>
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REFERENCES

