

Produktinformation



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Laborgeräte & Service

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PRODUCT INFORMATION



Clarithromycin

Item No. 19455

CAS Registry No.: 81103-11-9

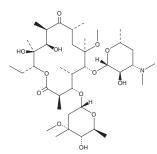
Formal Name: 6-O-methyl-erythromycin Synonyms: A-56268, Antibiotic A 56268,

MF: $C_{38}H_{69}NO_{13}$ 748.0 FW: **Purity:** ≥98%

Supplied as: A crystalline solid

Storage: -20°C Stability: ≥2 years Item Origin: Synthetic

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



Laboratory Procedures

Clarithromycin is supplied as a crystalline solid. A stock solution may be made by dissolving the clarithromycin in the solvent of choice. Clarithromycin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of clarithromycin in these solvents is approximately 1 mg/ml.

Clarithromycin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, clarithromycin should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Clarithromycin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Clarithromycin is a polyketide synthase-derived semisynthetic macrolide antibiotic. 1-3 It is active against methicillin-susceptible, but not methicillin-resistant, S. aureus (MIC $_{50}$ s = 0.06 and >128 µg/ml), S. pyogenes, L. monocytogenes, and B. pertussis (MIC₅₀ = 0.015, 0.25, and ≤0.008 μg/ml, respectively), among others.¹ Clarithromycin (25 mg/kg) decreases the number of colony-forming units (CFUs) in the spleen in a mouse model of M. avium infection.⁴ Formulations containing clarithromycin have been used in the treatment of bacterial infections.

References

- 1. Hardy, D.J., Hensey, D.M., Beyer, J.M., et al. Comparative in vitro activities of new 14-, 15-, and 16-membered macrolides. Antimicrob. Agents Chemother. 32(11), 1710-1719 (1988).
- 2. Wilson, D.N. The A-Z of bacterial translation inhibitors. Crit. Rev. Biochem. Mol. Biol. 44(6), 393-433 (2009).
- 3. Wu, J., Kinoshita, K., Khosla, C., et al. Biochemical analysis of the substrate specificity of the β-ketoacyl-acyl carrier protein synthase domain of module 2 of the erythromycin polyketide synthase. Biochemistry 43(51), 16301-16310 (2004).
- 4. Fernandes, P.B., Hardy, D.J., McDaniel, D., et al. In vitro and in vivo activities of clarithromycin against Mycobacterium avium. Antimicrob. Agents Chemother. 33(9), 1531-1534 (1989).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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