Azithromycin

Item No. 15004

CAS Registry No.: 83905-01-5
Formal Name: \(\text{(2R,3S,4R,5R,8R,10R,11R,12S,13S,14R)-13-[(2,6-dideoxy-3-C-methyl-3-O-methyl-\text{\`L}-ribo-hexopyranosyl)}\text{oxy}]-2-ethyl-3,4,10-trihydroxy-3,5,6,8,10,12,14-heptamethyl-11-[(3,4,6-trideoxy-3-(\text{\`D}-xylo-hexopyranosyl})\text{oxy}]-1-oxa-6-azacyclopentadecan-15-one}\)

Synonyms: CP 62,993, Zithromax®

MF: \(\text{C}_{38}\text{H}_{72}\text{N}_{2}\text{O}_{12}\)

FW: 749.0

Purity: ≥98%

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥2 years

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

Laboratory Procedures

Azithromycin is supplied as a crystalline solid. A stock solution may be made by dissolving the azithromycin in the solvent of choice. Azithromycin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of azithromycin in ethanol and DMF is approximately 16 mg/ml and approximately 5 mg/ml in DMSO.

Azithromycin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, azithromycin should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Azithromycin has a solubility of approximately 0.50 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

Azithromycin is a macrolide antibiotic with high stability at acidic pH, long half-life, and favorable effectiveness against a range of organisms.\(^1,2\) In addition, it interferes poorly with the cytochrome P450 system \textit{in vitro}, limiting side effects related to drug interactions.\(^3\) Azithromycin is effective, in combination with chloroquine, for protection against malaria.\(^4\)

References