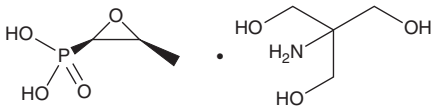
PRODUCT INFORMATION

Fosfomycin Trometamol

Item No. 23632

CAS Registry No.: 78964-85-9
Formal Name: P-[(2R,3S)-3-methyl-2-oxiranyl]-phosphonic acid compound with 2-amino-2-(hydroxymethyl)-1,3-propanediol
Synonym: Fosfomycin Tromethamine
MF: $C_4H_{11}NO_3 \bullet C_3H_7O_4P$
FW: 259.2
Purity: ≥98%
Supplied as: A solid
Storage: 4°C
Stability: ≥2 years



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

Laboratory Procedures

Fosfomycin trometamol is supplied as a solid. A stock solution may be made by dissolving the fosfomycin trometamol in the solvent of choice, which should be purged with an inert gas. Fosfomycin trometamol is slightly soluble in methanol.

Fosfomycin trometamol is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Fosfomycin trometamol is a broad-spectrum antibiotic that is active against Gram-negative and Gram-positive bacteria with MIC_{90} values of 8, 32, 4, and 32 µg/mL for ESBL *E. coli*, carbapenemase-producing *K. pneumoniae*, *P. mirabilis*, and methicillin-resistant *S. saprophyticus*, respectively, in a broth microdilution assay.[1] It is an inhibitor of uridine diphospho-N-acetyl-D-glucosamine enolpyruvyl transferase (MurA) that enters cells *via* the glycerol-3-phosphate and hexose-6-phosphate transporters.[2,3] Formulations containing fosfomycin trometamol have been used in the treatment of urinary tract infections.

References

1. Mezzatesta, M.L., La Rosa, G., Maugeri, G., *et al*. In vitro activity of fosfomycin trometamol and other oral antibiotics against multi-drug-resistant uropathogens. *Int. J. Antimicrob. Agents* **49(6)**, 763-766 (2017).
2. Kahan, F.M., Kahan, J.S., Cassidy, P.J., *et al*. The mechanism of action of fosfomycin (phosphonomycin). *Ann. N.Y. Acad. Sci.* **235(0)**, 364-386 (1974).
3. Santoro, A., Cappello, A.R., Madeo, M., *et al*. Interaction of fosfomycin with the glycerol 3-phosphate transporter of *Escherichia coli*. *Biochim Biophys. Acta*. **1810(12)**, 1323-1329 (2011).

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