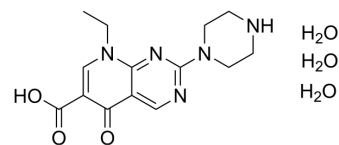


Pipemidic acid trihydrate

Cat. No.:	HY-W013766
CAS No.:	72571-82-5
Molecular Formula:	C ₁₄ H ₂₃ N ₅ O ₆
Molecular Weight:	357.36
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Pipemidic acid trihydrate, a derivative of Piromidic acid, is an antibacterial agent. Pipemidic acid trihydrate inhibits DNA gyrase. Pipemidic acid trihydrate is active against gram-negative bacteria including <i>Pseudomonas aeruginosa</i> as well as some gram-positive bacteria. Pipemidic acid trihydrate can be used for the research of intestinal, urinary, and biliary tract infections ^{[1][2]} .
In Vitro	Pipemidic acid trihydrate is an inhibitor of DNA gyrase that is a bacterial enzyme which catalyzes the ATP-dependent negative supercoiling of DNA ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Pipemidic acid (50 mg/kg) trihydrate is absorbed well by the oral route, and the peak levels in plasma ranged from 4 to 12 μg/mL in mice, rats, dogs, monkeys ^[3] . The mean lethal dose of Pipemidic acid trihydrate after a single oral dose was more than 16000 mg/kg in mice ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Iacovino R, et al. β-Cyclodextrin inclusion complex to improve physicochemical properties of pipemidic acid: characterization and bioactivity evaluation. *Int J Mol Sci*. 2013 Jun 25;14(7):13022-41.
- [2]. Aoyama H, et, al. Purification of *Citrobacter freundii* DNA gyrase and inhibition by quinolones. *Antimicrob Agents Chemother*. 1988 Jan;32(1):104-9.
- [3]. Shimizu M, et, al. Pipemidic acid: absorption, distribution, and excretion. *Antimicrob Agents Chemother*. 1975 Apr;7(4):441-6.

Caution: Product has not been fully validated for medical applications. For research use only.

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