



## Product Information

Product ID F5874

CAS No. 26016-98-8

Chemical Name

Synonym

Formula  $C_3H_5CaO_4P$

Formula Wt. 176.12

Melting Point

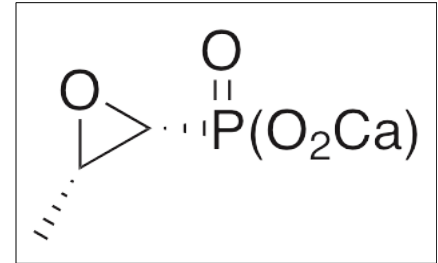
Purity  $\geq 97\%$

Solubility

Store Temp Ambient

Ship Temp Ambient

**Description** Fosfomycin is an antibiotic initially produced by *Streptomyces* that exhibits antibacterial, anti-parasitic, antimalarial, and nephroprotective activities. Fosfomycin is active against both gram positive and gram negative bacteria and acts by inhibiting MurA and preventing synthesis of bacterial cell walls. Fosfomycin also inhibits isopentenyl phosphate kinase, an enzyme in the archaeal mevalonate pathway. In vivo, fosfomycin inhibits iron release from the mitochondria, inhibiting lipid peroxidation and preventing aminoglycoside antibiotic-induced nephrotoxicity. This compound also displays some anti-inflammatory benefit, decreasing serum levels of TNF- $\alpha$ , IL-1 $\beta$ , and IL-6 in animal models of septic *Pseudomonas* infection, increasing survival rates.



**Bulk quantities available upon request**

Product ID	Size
F5874	1 g
F5874	5 g
F5874	25 g

**References** Olesen SH, Ingles DJ, Yang Y, et al. Differential antibacterial properties of the MurA inhibitors terreic acid and fosfomycin. *J Basic Microbiol.* 2013 May 20. [Epub ahead of print]. PMID: 23686727.

Mabanglo MF, Serohijos AW, Poulter CD. The *Streptomyces*-produced antibiotic fosfomycin is a promiscuous substrate for archaeal isopentenyl phosphate kinase. *Biochemistry.* 2012 Jan 31;51(4):917-25. PMID: 22148590.

Yanagida C, Ito K, Komiya I, et al. Protective effect of fosfomycin on gentamicin-induced lipid peroxidation of rat renal tissue. *Chem Biol Interact.* 2004 Jul 20;148(3):139-47. PMID: 15276870.

Borrmann S, Adegnik AA, Matsiegui PB, et al. Fosmidomycin-clindamycin for *Plasmodium falciparum* infections in African children. *J Infect Dis.* 2004 Mar 1;189(5):901-8. PMID: 14976608.

Matsumoto T, Tateda K, Miyazaki S, et al. Immunomodulating effect of fosfomycin on gut-derived sepsis caused by *Pseudomonas aeruginosa* in mice. *Antimicrob Agents Chemother.* 1997 Feb;41(2):308-13. PMID: 9021184.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.