Product Name: Clindamycin Phosphate
Product Number: C036
CAS Number: 24729-96-2
Molecular Formula: \( \text{C}_{18}\text{H}_{34}\text{ClN}_{2}\text{O}_{8}\text{PS} \)
Molecular Weight: 504.96
Form: powder
Appearance: White or almost white crystalline powder
Solubility: freely soluble in aqueous solution.
Source: Semi-synthetic
Water Content (Karl Fischer): \( \leq 6.0\% \)
pH: 3.5-4.5
Storage Conditions: Store at room temperature in an airtight container
Description: Clindamycin Phosphate (clindamycin-2-phosphate) is a broad-spectrum antibiotic and antiparasitic agent. It is a semi-synthetic derivative of Lincomycin, a natural lincosamide from \textit{Streptomyces lincolnensis}. Clindamycin Phosphate is freely soluble in water in aqueous solution.

We also offer:

- Clindamycin (C233)
- Clindamycin Hydrochloride (C035)

Mechanism of Action: Lincosamides inhibit bacterial protein synthesis by binding the 50S ribosomal subunit and interfering with tRNA activity during translation.

Spectrum: Clindamycin is a broad spectrum antibiotic targeting primarily Gram-positive and Gram-negative bacteria such as \textit{Clostridium} and \textit{Bacteroides} species. It is also effective against protozoa.

Microbiology Applications: Clindamycin is commonly used in clinical \textit{in vitro} microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against Gram-positive and Gram-negative anaerobes. Medical microbiologists use AST results to recommend antibiotic treatment options. Representative concentration ranges include:

- \textit{Bacteroides fragilis} 0.25 µg/mL - 4 µg/ml
- \textit{Clostridium difficile} 0.25 µg/mL - 32 µg/mL

For representative MIC data, click here.
References:


Li LH, Kuentzel K L, Shugars KD and Bhuyan BK (1977) Cytotoxicity of several marketed antibiotics on mammalian cells in culture. J. Antibiot (Tokyo) 30(6):506-512  PMID 560364

