Clindamycin Phosphate
PRODUCT DATA SHEET

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Product Name:	Clindamycin Phosphate
Product Number:	C036
CAS Number:	24729-96-2
Molecular Formula:	$C_{18}H_{34}ClN_2O_8PS$
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):	≤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 *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 *Clostridium* and *Bacteroides* species. It is also effective against protozoa.
Microbiology Applications	Clindamycin is commonly used in clinical *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:

- *Bacteroides fragilis* 0.25 µg/mL - 4 µg/ml
- *Clostridium difficile* 0.25 µg/mL - 32 µg/mL

For representative MIC data, click here.

References:

Dhawan VK and Thadepalli H (1982) Clindamycin: A review of fifteen years of experience. Clin. Infect. Dis. 4(6):1133-1153 PMID 6818656

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

Lovmar M and Tanel T (2003) The Mechanism of action of macrolides, lincosamides and streptogramin B reveals the nascent peptide exit path in the ribosome. *J. Molec. Microbiol.* 330(5): 1005-014 PMID 12860123

Magerlein BJ et al (1966) Chemical modification of lincomycin. Antimicrob Agents Chemother. 6:727 PMID 5985307

Wijsman JA, Dekaban GA and Rieder MJ (2013) Differential toxicity of reactive metabolites of clindamycin and sulfonamides in HIV-infected cells: Influence of HIV infection on clindamycin toxicity *in vitro*. J. Clin. Pharmacol. 45(3):346-351 PMID 15703369