Lincomycin
PRODUCT DATA SHEET

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Product Name:	Lincomycin
Product Number:	L014
CAS Number:	154-21-2
Molecular Formula:	$C_{18}H_{34}N_2O_6S$
Molecular Weight:	406.5
Appearance:	White solid
Solubility:	Soluble ethanol, methanol, DMF or DMSO. Slightly soluble in water.
Source:	S. lincolnensis var. lincolnensis
Storage Conditions:	-20°C
Description:	Lincomycin is a lincosamide first isolated from *Streptomyces licolnensis* by researchers at Upjohn in 1962. This class of antibacterial contains a rare amino acid (4-propyl-N-methylprolin) coupled to an equally rare aminomethylthio-octopyranoside sugar. Lincomycin is often incorrectly considered an aminoglycoside but it actually shares little or no structural similarity. It is effective for Gram-positive bacteria and disrupts protein synthesis. Lincomycin is soluble in ethanol, methanol, DMF and DMSO. Lincomycin is slightly soluble in water. We also offer: • Lincomycin HCl, USP (L002) • Lincomycin HCl, EP (L016)
Mechanism of Action:	Lincomycin binds to the 50S ribosomal subunit and blocks bacterial protein synthesis.
Spectrum:	Lincomycin is effective against Gram-positive bacteria , and protozoanas. It has been effective for *Staphylococcus, Streptococcus*, and *Bacteroides fragilis.*
Plant Biology Applications	Lincomycin provides a powerful plant selection agent that facilitates recovery of plastid transformants. Cultured *Nicotiana* cells were used *in vitro.* Resistant cells are green versus sensitive cells are white on the selective medium (Moll et al, 1990).

References:

Josten JJ and Allen PM (1964) The mode of action of lincomycin. Biochem. Biophys. Res. Comm. 14(3):241-244 PMID 5836512

Mason D.J. et al. (1962) Lincomycin, a new antibiotic. I. Discovery and biological properties. Antimicrob. Agents Chemother. 1963:554

Mason DJ and Lewis C (1964) Biological activity of the lincomycin related antibiotics. Antimicrob. Agents Chemother. 10:7-12 PMID 14288036

Moll B, Polsby L and Maliga P (1990) Streptomycin and lincomycin resistances are selective plastid markers in cultured *Nicotiana* cells. Mol. Gen. Genet. 221 (2):245-250

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