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Amikacin

National Cancer Institute

Source

National Cancer Institute. *Amikacin*. NCI Thesaurus. Code C61615.

A broad-spectrum semi-synthetic aminoglycoside antibiotic, derived from kanamycin with antimicrobial property. Amikacin irreversibly binds to the bacterial 30S ribosomal subunit, specifically locking 16S rRNA and S12 protein within the 30S subunit. This leads to interference with translational initiation complex and misreading of mRNA, thereby hampering protein synthesis and resulting in bactericidal effect. This agent is usually used in short-term treatment of serious infections due to susceptible strains of Gram-negative bacteria.