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Streptomycin

National Cancer Institute

Source

National Cancer Institute. *Streptomycin*. NCI Thesaurus. Code C61952.

An aminoglycoside antibiotic derived from *Streptomyces griseus* with antibacterial activity. Streptomycin irreversibly binds to the 16S rRNA and S12 protein within the bacterial 30S ribosomal subunit. As a result, this agent interferes with the assembly of initiation complex between mRNA and the bacterial ribosome, thereby inhibiting the initiation of protein synthesis. In addition, streptomycin induces misreading of the mRNA template and causes translational frameshift, thereby results in premature termination. This eventually leads to bacterial cell death.