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# Daptomycin

National Cancer Institute

## Source

National Cancer Institute. *Daptomycin*. NCI Thesaurus. Code C47470.

A semi-synthetic cyclic lipopeptide antibiotic isolated from the bacterium *Streptomyces roseosporus* with broad-spectrum antibiotic activity against Gram-positive bacteria. Daptomycin has a distinct mechanism of action, in which it binds to bacterial membrane and causes rapid depolarization of the cell membrane due to calcium-dependant potassium efflux; the loss of membrane potential leads to inhibition of DNA, RNA and protein synthesis, resulting in bacterial cell death. This agent does not penetrate the outer membrane of gram-negative bacteria.