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Ampicillin Sodium/Sulbactam Sodium

National Cancer Institute

Source

National Cancer Institute. *Ampicillin Sodium/Sulbactam Sodium*. NCI Thesaurus. Code C28823.

A combination formulation of the sodium salts of the antibiotic ampicillin and the beta-lactamase inhibitor sulbactam with antibacterial activity. Ampicillin, a broad-spectrum, semisynthetic penicillin, binds to and inactivates penicillin-binding proteins (PBP) located on the inner membrane of the bacterial cell wall, thereby interfering with the cross-linking of peptidoglycan chains necessary for bacterial cell wall strength and rigidity. As a result, the cell wall is weakened and the cell lyses. The sulbactam component irreversibly binds to bacterial beta-lactamase at or near its active site, thereby interfering with substrate binding and inhibiting bacterial metabolism of penicillin and cephalosporin beta-lactam antibiotics, effectively extending their antibiotic spectrum to include many beta-lactam-resistant bacteria.