

14.3 MECHANISMS OF ANTIBACTERIAL DRUGS

Selective toxicity – drug selectively kills or inhibits the growth of microbial targets while causing minimal or no harm to the host.

Antimicrobial	Mech. Action	Mode of Resist.	Plasmid?
Penicillin family	Block cell wall synthesis	Breaks beta lactam ring	yes
Cephalosporins	Block cell wall synthesis	Breaks beta lactam ring	yes
Methicillin	Block cell wall synthesis	Altered cell wall target	no
Vancomycin	Block cell wall synthesis	Altered cell wall target	yes
Aminoglycosides	Blocks protein synthesis	Altered porins restrict entrance	yes
Tetracyclines	Blocks protein synthesis	Active transport out of cell	yes
Sulfonamides + Trimethoprim	Blocks synthesis and action of folic acid	Altered target enzymes	yes