SANFORD GUIDE — Antibacterials

Penicillins, Carbapenems, Aztreonam

Antibacterials	Penicillin G	Penicillin VK	Nafcillin	Oxacillin	Cloxacillin	Flucloxacillin	Dicloxacillin	Ampicillin	Amoxicillin	Amox-Clav	Amp-Sulb	Pip-Tazo	Doripenem	Ertapenem	Imipenem	Meropenem	Mero-Vabor	Aztreonam
Aerobic gram-pos cocci																		
E. faecalis (S)	++	0	0	0	0	0	0	++	++	+	+	+	+/-	+/-	+/-	+/-	+/-	0
E. faecium (S)	+/-	0	0	0	0	0	0	+/-	+/-	+/-	+/-	+/-	0	0	0	0	0	0
E. faecalis (VRE)	+/-	0	0	0	0	0	0	+/-	+/-	+/-	+/-	+/-	0	0	0	0	0	0
E. faecium (VRE)	+/-	0	0	0	0	0	0	+/-	+/-	+/-	+/-	+/-	0	0	0	0	0	0
S. aureus MSSA	+/-	+/-	++	++	++	++	++	+/-	+/-	+	+	+	+*	+	+	+	+	0
S. aureus HA-MRSA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. aureus CA-MRSA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Staph coag-neg (S)	+/-	+/-	++	++	++	++	++	+/-	+/-	+	+	+	+	+	+	+	+	0
Staph coag-neg (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. epidermidis (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. epidermidis (S)	+/-	+/-	++	++	++	++	++	+/-	+/-	+	+	+	+	+	+	+	+	0
S. lugdunensis	+/-	+/-	++	++	++	++	++	+/-	+/-	+	+	+	+	+	+	+	+	0
S. saprophyticus	+/-	+/-	+	+	+	+	+	+/-	+/-	++	+	+	+	+	+	+	+	0
Strep. anginosis gp	++	++	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0
Strep. pyogenes (A)	++	++	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0
Strep. agalactiae (B)	++	++	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0
Strep. gp C,F,G	++	++	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0
Strep. pneumoniae	++	++	+	+	+	+	+	+	+	+	+	+	+*	+	+	+	+	0
Viridans Strep.	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+	+	+	+	+	0
Aerobic gram-pos bacilli																		
Arcanobacter. sp	+	+	?	?	?	?	?	+	+	+	+	+	+	+	+	+	+	0
C. diphtheriae	++	++	0	0	0	0	0	+	+	+	+	+	?	?	?	?	?	0
C. jeikeium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L. monocytogenes	+	0	0	0	0	0	0	++	+	+	+	+	?	?	?	+/-	+/-	0
Nocardia sp.	0	0	0	0	0	0	0	0	0	+/-	?	?	?	0	++	+	+	0
Aerobic GNB - Enteric																		
Aeromonas sp.	0	0	0	0	0	0	0	0	0	+/-	+/-	+	+	+	+	+	+	+
C. jejuni	0	0	0	0	0	0	0	0	0	+	0	0	+	+	+	+	+	?
C. freundii	0	0	0	0	0	0	0	0	0	0	0	++	+	+	+	++	+	+/-
C. koseri	0	0	0	0	0	0	0	0	0	0	0	++	+	+	+	++	+	+/-
E. aerogenes	0	0	0	0	0	0	0	0	0	0	0	+	+	+	+	+	+	+
E. cloacae	0	0	0	0	0	0	0	0	0	0	0	+	+	+	+	+	+	+
E. coli (S)	0	0	0	0	0	0	0	+/-	+/-	+	+	+	+*	+	+	+	+	+
E. coli, Klebs ESBL	0	0	0	0	0	0	0	0	0	0	0	+/-	+*	+	++	++	+	0
E. coli, Klebs KPC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	++	0
E. coli, Klebs MBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+/-*
Enterics CRE, NOS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+/-	0
K. oxytoca	0	0	0	0	0	0	0	0	0	+	+	+	+	+	+	+	+	+
K. pneumoniae (S)	0	0	0	0	0	0	0	0	0	+	+	+	+*	+	+	+	+	+
Morganella sp.	0	0	0	0	0	0	0	0	0	0	0	+	+	+	+/-*	+	+	+
P. mirabilis	0	0	0	0	0	0	0	+	+	+	+	+	+	+	+/-*	+	+	+
P. vulgaris	0	0	0	0	0	0	0	0	0	+	+	+	+	+	+/-*	+	+	+
Providencia sp.	0	0	0	0	0	0	0	0	0	0	0	+	++	++	+/-*	++	+	+
Salmonella sp.	0	0	0	0	0	0	0	+/-	+/-	+	+	+	+	+	+	+	+	+
Serratia sp.	0	0	0	0	0	0	0	0	0	0	0	+	+	+	+	+	+	+
Shigella sp.	0	0	0	0	0	0	0	0	0	+	+	+	+	+	+	+	+	+
Y. enterolitica	0	0	0	0	0	0	0	0	0	+/-	+/-	+	+	?	+	+	+	+
Aerobic GNB - Non-enteric																		
Bartonella sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B. pertussis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B. burgdoferi	+	0	0	0	0	0	0	++	++	+	+	0	0	0	0	0	0	0
Brucella sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capnocytophagia	+/-	+/-	0	0	0	0	0	+/-	+/-	++	+	++	+	?	++	++	+	0
C. burnetii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ehrlichia, Anaplas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eikenella sp	+/-	+/-	0	0	0	0	0	+/-	+/-	+	+	+	+	+	+	+	+	?
F. tularensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H. ducreyi	0	0	0	0	0	0	0	0	0	0	0	0	?	?	?	?	?	?
H. influenzae	0	0	0	0	0	0	0	+/-	+/-	++	++	+	+	+	+	+	+	+
Kingella sp.	+	+	0	0	0	0	0	+	+	+	+	+	+	+	+	+	+	?
K. granulomatis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Legionella sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leptospira sp.	++	0	0	0	0	0	0	+	+	+	+	+	+	+	+	+	+	+
M. catarrhalis	0	0	0	0	0	0	0	0	0	++	+	+	+	+	+	+	+	+
N. gonorrhoeae	0	0	0	0	0	0	0	0	0	0	0	0	+	+	+	+	+	+
N. meningitidis	+	0	0	0	0	0	0	++	++	0	0	+	+	+	+	+	+	+
P. multocida	++	++	0	0	0	0	0	++	++	++	++	+	+	+	+	+	+	+
R. ricketsii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T. pallidum	++	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
V. cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
V. parahemolyticus	0	0	0	0	0	0	0	0	0	0	0	0	?	?	?	?	?	?
V. vulnificus	0	0	0	0	0	0	0	0	0	0	0	0	?	?	?	?	?	?
Y. pestis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aerobic GNB non-fermenter																		
A. baumanii	0	0	0	0	0	0	0	0	0	0	+/-	+/-	+*	0	++	+/-	+/-	0
B. cepacia	0	0	0	0	0	0	0	0	0	0	0	0	+/-	0	0	+/-	+/-	0
P. aeruginosa	0	0	0	0	0	0	0	0	0	0	0	+	+*	0	+	+	+	+
S. maltophilia	0	0	0	0	0	0	0	0	0	0	0	+/-	0	0	0	0	0	0
Aerobic - cell wall-deficient																		
C. trachomatis	0	0	0	0	0	0	0	+*	+*	0	0	0	0	0	0	0	0	0
Chlamydophila sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. genitalium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. pneumoniae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. urealyticum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anaerobic GNB																		
B. fragilis	0	0	0	0	0	0	0	0	0	++	+	++	+	++	++	++	+	0
F. necrophorum	+/-	+/-	0	0	0	0	0	+/-	+/-	+	+	+	+	+	+	+	+	0
P. melaninogenica	+/-	+/-	0	0	0	0	0	+/-	+/-	+	+	+	+	+	+	+	+	0
Anaerobic gram-positive																		
Actinomyces sp.	++	++	0	0	0	0	0	++	++	+	+	+	+	+	+	+	+	0
C. difficille	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clostridum sp.	++	+	0	0	0	0	0	+	+	+	+	+	+	+	+	+	+	0
P. acnes	++	+	?	?	?	?	?	+	+	+	+	+	+	+	+	+	+	0
Peptostreptococci	++	++	0	0	0	0	0	++	++	+	+	+	+	+	+	+	+	0

Fluoroquinolone, Parenteral Cephalosporins

Antibacterials	Ciprofloxacin	Delafloxacin	Ofloxacin	Levofloxacin	Moxifloxacin	Norfloxacin	Prulifloxacin	Gemifloxacin	Gatifloxacin	Cefazolin	Cefotetan	Cefoxitin	Cefuroxime	Cefotaxime	Ceftizoxime	Ceftriaxone	Ceftazidime	Cefepime	Ceftaz-Avibac	Ceftaroline	Ceftol-Tazo
Aerobic gram-pos cocci																					
E. faecalis (S)	+/-*	+	+/-	+	+	+	+/-*	+	+	0	0	0	0	0	0	+/-*	0	0	0	0	0
E. faecium (S)	0	0	0	0	+/-	0	0	+/-	+/-	0	0	0	0	0	0	0	0	0	0	0	0
E. faecalis (VRE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E. faecium (VRE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. aureus MSSA	0	+	+	+	+	0	0	+	+	++	+	+	+	+	+	+	+/-	+	+/-	+	?
S. aureus HA-MRSA	0	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0
S. aureus CA-MRSA	0	+	+/-	+/-	+/-	0	0	+/-	+/-	0	0	0	0	0	0	0	0	0	0	+	0
Staph coag-neg (S)	+	+	+	+	+	0	+	+	+	++	+	+	+	+	+	+	+/-	+	+/-	+	?
Staph coag-neg (R)	0	+	0	+/-	+/-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0
S. epidermidis (R)	0	+	0	+/-	+/-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0
S. epidermidis (S)	+	+	+	+	+	0	+	+	+	++	+	+	+	+	+	+	+/-	+	+/-	+	?
S. lugdunensis	0	+	+	+	+	0	0	+	+	++	+	+	+	+	+	+	+/-	+	+/-	+	?
S. saprophyticus	+	+	+	+	+	0	+	+	+	++	+	+	+	+	+	+	+/-	+	+/-	+	?
Strep. anginosis gp	+/-	+	+/-	+/-	+/-	0	+/-	+/-	+/-	+	+	+	+	+	+	+	+	+	+	+	+
Strep. pyogenes (A)	+/-	+	+/-	+/-	+/-	0	+/-	+/-	+/-	+	+	+	+	+	+	+	+	+	+	+	+
Strep. agalactiae (B)	+/-	+	+/-	+/-	+/-	0	+/-	+/-	+/-	+	+	+	+	+	+	+	+	+	+	+	+
Strep. gp C,F,G	+/-	+	+/-	+/-	+/-	0	+/-	+/-	+/-	+	+	+	+	+	+	+	+	+	+	+	+
Strep. pneumoniae	+/-	+	+/-	+	+	0	+/-	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Viridans Strep.	0	+	0	+	+	0	0	+	+	+	+	+	+	++	+	++	+/-	+	+/-	+	+
Aerobic gram-pos bacilli																					
Arcanobacter. sp	+	?	+	+	+	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	?
C. diphtheriae	?	?	?	?	?	0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
C. jeikeium	0	?	0	0	+/-	0	0	+/-	0	0	0	0	0	0	0	0	0	0	0	0	0
L. monocytogenes	0	+	0	+	+	0	0	+	+	0	0	0	0	0	0	0	0	0	0	0	0
Nocardia sp.	0	?	0	0	0	0	0	0	0	0	0	0	0	+/-	0	+/-*	0	0	0	0	0
Aerobic GNB - Enteric																					
Aeromonas sp.	+	+	+	+	+	0	+	+	+	0	0	0	?	+	+	+	+	+	+	?	?
C. jejuni	+	+	+	+	+	0	+	+	+	0	0	0	0	+	+	+	+	+	+	?	?
C. freundii	+	+	+	+	+	+	+	+	+	0	0	0	0	+/-	+/-	+/-	+/-	++	+	+	+
C. koseri	+	+	+	+	+	+	+	+	+	0	0	0	0	+/-	+/-	+/-	+/-	++	+	+	+
E. aerogenes	+	+	+	+	+	+	+	+	+	0	0	0	0	0	0	0	0	+	+	0	+
E. cloacae	+	+	+	+	+	+	+	+	+	0	0	0	0	0	0	0	0	+	+	0	+
E. coli (S)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
E. coli, Klebs ESBL	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	0	+/-	+/-	0	0	0	0	0	0	+	0	+
E. coli, Klebs KPC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	++	0	0
E. coli, Klebs MBL	+/-	0	0	+/-	0	0	+/-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enterics CRE, NOS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+/-	0	0
K. oxytoca	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
K. pneumoniae (S)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Morganella sp.	+	+	+	+	?	+	+	?	?	0	+	+	0	+	+	+	+	++	+	+	+
P. mirabilis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
P. vulgaris	+	+	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	?	+
Providencia sp.	+	+	+	+	+	+	+	?	?	0	+	+	0	+	+	+	+	+	+	?	+
Salmonella sp.	+	+	+	+	+	0	+	+	+	0	?	?	?	+	+	+	+	+	+	?	?
Serratia sp.	+	+	+	+	+	0	+	+	+	0	+	0	0	+	+	+	+	+	+	?	+
Shigella sp.	++	+	+	++	+	0	++	+	+	0	?	?	?	+	+	+	+	+	+	?	?
Y. enterolitica	++	+	+	++	+	0	++	?	+	0	+/-	+/-	+/-*	++	+	++	+/-*	++	?	?	?
Aerobic GNB - Non-enteric																					
Bartonella sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B. pertussis	?	?	?	?	?	0	?	?	?	0	0	0	0	0	0	0	0	0	0	0	0
B. burgdoferi	0	0	0	0	0	0	0	0	0	0	0	0	+	+	0	++	0	0	0	0	0
Brucella sp.	+	?	?	?	?	0	+	?	?	0	0	0	0	0	0	0	0	0	0	0	0
Capnocytophagia	+/-	?	+/-	+/-	?	0	+/-	?	?	0	0	0	0	+	?	+	+	+	+	0	0
C. burnetii	+	?	+	+	+	0	+	+*	+*	0	0	0	0	0	0	0	0	0	0	0	0
Ehrlichia, Anaplas	?	?	?	?*	?	0	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eikenella sp	+	?	+	+	?	0	+	?	?	0	?	+	0	+	?	+	?	?	?	?	?
F. tularensis	++	?	?	?	?	0	++	?	?	0	0	0	0	0	0	0	0	0	0	0	0
H. ducreyi	++	?	?	+	?	0	++	?	?	0	0	0	0	0	0	++	0	?	0	0	0
H. influenzae	+	+	+	++	++	0	+	+	+	0	+	+	+	++	+	++	+	+	+	+	+
Kingella sp.	+	+	+	++	?	0	+	?	?	+	+	+	+	+	+	++	+	+	+	+	+
K. granulomatis	++	?	?	?	?	0	++	?	?	0	0	+	0	0	0	+	0	0	0	0	0
Legionella sp.	++	+	++	++	++	0	++	+	+	0	0	0	0	0	0	0	0	0	0	0	0
Leptospira sp.	+	+	+	+	+	0	+	+	+	?	?	?	?	++	?	++	?	+	+	?	?
M. catarrhalis	+	+	+	+	+	0	+	+	+	0	+	+/-	+	+	+	+	+	+	+	+	+
N. gonorrhoeae	+/-	?	+/-	+/-	0	0	+/-	+*	0	+/-	+/-	+/-	0	+/-	+/-	++	?	+	?	?	?
N. meningitidis	?	?	?	?	?	0	?	?	?	0	0	0	+	+	+	++	+	+	+	?	?
P. multocida	+	+	+	+	+	0	+	+	+	0	?	?	+	+	+	+	?	+	?	+	+
R. ricketsii	+/-	?	+/-	+/-	+/-	0	+/-	?	?	0	0	0	0	0	0	0	0	0	0	0	0
T. pallidum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0	0	0	0
V. cholera	+	?	?	?	?	0	+	?	?	0	0	0	0	0	0	0	0	0	0	0	0
V. parahemolyticus	+	?	+	+	?	0	+	?	?	0	0	0	0	+	+	+	+	+	+	?	?
V. vulnificus	+	?	+	+	?	0	+	?	?	0	0	0	0	+	+	+	+	+	+	?	?
Y. pestis	+	?	?	?	?	0	+	?	?	0	0	0	0	0	0	0	0	0	0	0	0
Aerobic GNB non-fermenter																					
A. baumanii	+/-	?	+/-	+/-	+/-	0	+/-	?	?	0	0	0	0	0	0	+/-	+/-	+/-	?	?	+/-
B. cepacia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+/-	+/-	+	0	+
P. aeruginosa	+	+	0	+	0	0	+	0	0	0	0	0	0	0	0	0	+	+	+	0	+
S. maltophilia	0	?	0	+/-	+/-	0	0	?	?	0	0	0	0	0	0	0	+/-	0	+/-	0	0
Aerobic - cell wall-deficient																					
C. trachomatis	0	?	++	++	+	0	0	+	+	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydophila sp.	+	?	+	+	+	0	+	+	+	0	0	0	0	0	0	0	0	0	0	0	0
M. genitalium	0	?	0	+/-	++*	0	0	?	+*	0	0	0	0	0	0	0	0	0	0	0	0
M. pneumoniae	+	?	+	++	++	0	+	+	+	0	0	0	0	0	0	0	0	0	0	0	0
U. urealyticum	+	?	+	+	+	0	+	?	?	0	0	0	0	0	0	0	0	0	0	0	0
Anaerobic GNB																					
B. fragilis	0	+	0	0	+/-	0	0	0	0	0	+/-	+/-	0	0	+	0	0	0	0	0	+
F. necrophorum	0	?	0	0	?	0	0	?	?	0	+	+	?	+	?	+*	?	?	?	?	?
P. melaninogenica	0	?	0	+/-	+	0	0	?	?	0	+	+	?	?	?	?	?	?	?	?	+
Anaerobic gram-positive																					
Actinomyces sp.	0	?	0	?	?	0	0	?	?	0	?	+	0	+	+	+	?	?	?	?	?
C. difficille	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clostridum sp.	0	+	0	0	0	0	0	0	0	0	+	+	?	+	+	+	?	?	?	?	?
P. acnes	+/-	0	+/-	+/-	+/-	0	+/-	?	?	+	+	+	+	+	+	++	+	+	+	+	+
Peptostreptococci	0	+	0	+	+	0	0	?	+	+	+	+	+	+	+	+	+	+	+	+	+

Oral Cephalosporins, Aminoglycosides, Chloramphenicol, Clindamycin, Macrolides

Antibacterials	Cefadroxil	Cephalexin	Cefaclor	Cefprozil	Cefurox-Axe	Cefixime	Ceftibuten	Cefpodoxime	Cefdinir	Cefditoren	Gentamicin	Tobramycin	Amikacin	Chloramphenicol	Clindamycin	Erythromycin	Azithromycin	Clarithromycin	Telithromycin
Aerobic gram-pos cocci																			
E. faecalis (S)	0	0	0	0	0	0	0	0	0	0	+/-*	0	0	+/-	0	0	0	0	0
E. faecium (S)	0	0	0	0	0	0	0	0	0	0	+/-*	0	0	+/-	0	0	0	0	0
E. faecalis (VRE)	0	0	0	0	0	0	0	0	0	0	+/-*	0	0	+/-	0	0	0	0	0
E. faecium (VRE)	0	0	0	0	0	0	0	0	0	0	+/-*	0	NA	+/-	0	0	0	0	0
S. aureus MSSA	+	+	+	+	+	0	0	+	+	+	+/-*	?	?	+	+	+/-	+/-	+/-	+
S. aureus HA-MRSA	0	0	0	0	0	0	0	0	0	0	+/-*	?	?	+	+/-	0	0	0	+/-
S. aureus CA-MRSA	0	0	0	0	0	0	0	0	0	0	+/-*	?	?	+	+	0	0	0	+/-
Staph coag-neg (S)	+/-	+/-	+/-	+	+	0	0	+	+	+	+/-*	?	?	+	+	+/-	+/-	+/-	+
Staph coag-neg (R)	0	0	0	0	0	0	0	0	0	0	+/-*	?	?	+	+/-	0	0	0	+/-
S. epidermidis (R)	0	0	0	0	0	0	0	0	0	0	+/-*	?	?	+	+/-	0	0	0	+/-
S. epidermidis (S)	+	+	+	+	+	?	?	+	+	+	+/-*	?	?	+	+	+	+	+	+
S. lugdunensis	+	+	+	+	+	?	?	+	+	+	+/-*	?	?	+	+	+	+	+	+
S. saprophyticus	++	++	++	+	+	?	?	+	+	+	0	0	0	+	+	+/-	+/-	+/-	?
Strep. anginosis gp	+	+	+	+	+	+	+	+	+	+	+/-*	?	?	+	+	+/-	+/-	+/-	+
Strep. pyogenes (A)	+	+	+	+	+	+	+	+	+	+	+/-	0	0	+	+	+/-	+/-	+/-	+
Strep. agalactiae (B)	+	+	+	+	+	+	+	+	+	+	+/-	0	0	+	+	+/-	+/-	+/-	+
Strep. gp C,F,G	+	+	+	+	+	+	+	+	+	+	+/-*	0	0	+	+	+/-	+/-	+/-	+
Strep. pneumoniae	+	+	+	+	+	+	+	+	+	+	0	0	0	+	+	+/-	+/-	+/-	+
Viridans Strep.	+	+	+	0	+	+	0	+	+	+	+/-*	0	0	+	+/-	+/-	+/-	+/-	+
Aerobic gram-pos bacilli																			
Arcanobacter. sp	+	+	+	+	+	+	+	+	+	?	?	?	?	?	++	++	++	++	+
C. diphtheriae	?	?	?	?	?	?	?	?	?	?	0	0	0	0	+	++	+	+	?
C. jeikeium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L. monocytogenes	0	0	0	0	0	0	0	0	0	0	+/-*	?	?	0	0	0	0	0	0
Nocardia sp.	0	0	0	0	0	0	0	0	0	0	0	0	++*	0	0	0	?	?	?
Aerobic GNB - Enteric																			
Aeromonas sp.	?	0	?	?	?	?	?	?	?	?	+	+	+	+	0	0	0	0	0
C. jejuni	0	0	0	0	0	0	0	0	0	0	+	+	+	?	?	++	++	+	0
C. freundii	0	0	0	0	0	+	+	+	+	?	+	+	+	?	0	0	0	0	0
C. koseri	0	0	0	0	0	+	+	+	+	?	+	+	+	?	0	0	0	0	0
E. aerogenes	0	0	0	0	0	0	0	0	0	0	+	+	+	0	0	0	0	0	0
E. cloacae	0	0	0	0	0	0	0	0	0	0	+	+	+	0	0	0	0	0	0
E. coli (S)	+/-	+/-	+/-	+	+	+	+	+	+	?	+	+	+	+	0	0	+/-*	0	0
E. coli, Klebs ESBL	0	0	0	0	0	0	0	0	0	0	+/-	+/-	+/-	+/-	0	0	0	0	0
E. coli, Klebs KPC	0	0	0	0	0	0	0	0	0	0	+/-	+/-	+/-	0	0	0	0	0	0
E. coli, Klebs MBL	0	0	0	0	0	0	0	0	0	0	+/-	+/-	+/-	0	0	0	0	0	0
Enterics CRE, NOS	0	0	0	0	0	0	0	0	0	0	+/-	+/-	+/-	0	0	0	0	0	0
K. oxytoca	+/-	+/-	+/-	+	+	+	+	+	+	?	+	+	+	+	0	0	0	0	0
K. pneumoniae (S)	+/-	+/-	+/-	+	+	+	+	+	+	?	+	+	+	+	0	0	0	0	0
Morganella sp.	0	0	0	0	0	0	0	0	0	0	+	+	+	?	0	0	0	0	0
P. mirabilis	+	+	+	+	+	+	+	+	+	?	+	+	+	?	0	0	0	0	0
P. vulgaris	0	0	0	0	0	+	+	+	?	?	+	+	+	+/-	0	0	0	0	0
Providencia sp.	0	0	0	0	0	+	+	+	?	?	+/-	+/-	+	?	0	0	0	0	0
Salmonella sp.	0	0	0	0	0	+	+	+	+	?	+	+	+	+	0	0	+	0	0
Serratia sp.	0	0	0	0	0	+	0	0	0	0	+	+	+	0	0	0	0	0	0
Shigella sp.	0	0	0	0	0	+	+	+	+	?	+	+	+	+	0	0	+	0	0
Y. enterolitica	0	0	0	0	0	+	+	?	?	?	+	+	+	0	0	0	0	0	0
Aerobic GNB - Non-enteric																			
Bartonella sp.	0	0	0	0	0	0	0	0	0	0	++*	0	0	0	0	+	++	++	?
B. pertussis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	++	++	?
B. burgdoferi	0	0	0	0	++	0	0	0	0	0	0	0	0	0	0	+	+	+	?
Brucella sp.	0	0	0	0	0	0	0	0	0	0	+	?	?	+	0	0	0	0	0
Capnocytophagia	0	0	0	0	0	0	0	0	0	0	+/-	+/-	+/-	+	++	?	?	?	?
C. burnetii	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	+	+	?
Ehrlichia, Anaplas	0	0	0	0	0	0	0	0	0	0	0	0	0	+/-	0	0	0	0	0
Eikenella sp	0	0	0	?	0	?	?	?	?	?	+/-	0	0	+	0	0	0	0	0
F. tularensis	0	0	0	0	0	0	0	0	0	0	++*	+	?	+	?	0	?	?	?
H. ducreyi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	++	++	?	?
H. influenzae	0	0	+/-	+	+	+	+	+	+	+	0	0	0	+	0	0	+	+	+
Kingella sp.	0	0	0	+	0	+	+	+	+	+	+	0	0	+	0	0	?	?	?
K. granulomatis	0	0	0	0	0	0	0	0	0	0	+	?	?	+	0	++	++	+	0
Legionella sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	++	++	++	+
Leptospira sp.	?	?	?	?	?	?	?	?	?	?	0	0	0	+	0	+	++	+	?
M. catarrhalis	0	0	+/-	+	+	+	+	+	+	+	0	0	0	0	0	+	+	+	+
N. gonorrhoeae	0	0	0	0	0	+	0	+	0	0	0	0	0	0	0	0	+	0	0
N. meningitidis	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0	0	0	0
P. multocida	?	0	0	?	+	+	?	+	+	?	+/-	+/-	+/-	?	0	0	+	0	0
R. ricketsii	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0	0	+/-	0
T. pallidum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0
V. cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+	?	?
V. parahemolyticus	0	0	0	0	0	0	0	0	0	0	?	?	?	+	?	?	+	0	0
V. vulnificus	0	0	0	0	0	0	0	0	0	0	?	?	?	+	0	0	?	0	0
Y. pestis	0	0	0	0	0	0	0	0	0	0	+	?	?	+	0	0	0	0	0
Aerobic GNB non-fermenter																			
A. baumanii	0	0	0	0	0	0	0	0	0	0	0	0	+/-	0	0	0	0	0	0
B. cepacia	0	0	0	0	0	0	+/-	0	0	0	0	0	0	+/-	0	0	0	0	0
P. aeruginosa	0	0	0	0	0	0	0	0	0	0	+	+	+	0	0	0	0	0	0
S. maltophilia	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0	0	0	0
Aerobic - cell wall-deficient																			
C. trachomatis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	++	+	?
Chlamydophila sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	+	+	+
M. genitalium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	?	++*	?	?
M. pneumoniae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+/-	+/-	+/-	+/-
U. urealyticum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	++	++*	+	?
Anaerobic GNB																			
B. fragilis	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+/-	0	0	0	0
F. necrophorum	?	?	?	?	?	?	?	?	?	?	0	0	0	+	+	0	0	0	0
P. melaninogenica	?	?	?	?	?	?	?	?	?	?	0	0	0	+	+	+/-	+/-	+/-	0
Anaerobic gram-positive																			
Actinomyces sp.	?	?	?	?	?	?	?	?	?	?	0	0	0	+	++	++	+	+	?
C. difficille	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clostridum sp.	?	?	?	?	?	?	?	?	?	?	0	0	0	+	+	+	+	+	?
P. acnes	+	0	+	+	+	+	+	?	?	?	+	?	?	+	+/-	+/-	+/-	+/-	?
Peptostreptococci	+	+	+	+	+	+	+	+	?	?	0	0	0	+	+	+/-	+/-	+/-	?

Tetracyclines, Glyco/Lipo, Ox-lid, Poly, Other

Antibacterials	Doxycycline	Minocycline	Tetracycline	Tigecycline	Daptomycin	Vancomycin	Teicoplanin	Telavancin	Oritavancin	Dalbavancin	Linezolid	Tedizolid	Polymyxin B	Colistin	Fusidic Acid	Rif (comb)	TMP-SMX	Nitrofurantoin	Fosfomycin (IV)	Fosfomycin (po)	Metronidazole	Quinu-Dalfo
Aerobic gram-pos cocci																						
E. faecalis (S)	+/-	+/-	+/-	+	+	++	++	+	+	+	+	+	0	0	+/-	+/-*	0	+	+/-	+/-	0	0
E. faecium (S)	+/-	+/-	+/-	+	+	+/-	+/-	+/-	+	+/-	++	+	0	0	+/-	+/-*	0	+	+/-	+/-	0	+
E. faecalis (VRE)	+/-	+/-	+/-	+/-	+	0	0	+/-	+	0	++	+	0	0	0	+/-*	0	+	+/-	+/-	0	0
E. faecium (VRE)	+/-	+/-	+/-	+/-	+	0	0	+/-	+	0	++	+	0	0	0	+/-*	0	+	+/-	+/-	0	+
S. aureus MSSA	+	+	+	+	+	+	+	+	+	+	+	+	0	0	+	+/-*	+	0	+	0	0	+
S. aureus HA-MRSA	+	+	+/-	+	++*	++	++	+	+	+	++	+	0	0	+	+/-*	+	0	+	0	0	+
S. aureus CA-MRSA	+	+	+/-	+	++*	++	++	+	+	+	+	+	0	0	+	+/-*	+	0	+	0	0	+
Staph coag-neg (S)	+	+	+	+	+	+	+	+	+	+	+	+	0	0	+	+/-*	+	0	+	0	0	+
Staph coag-neg (R)	+/-	+/-	+/-	+	++	++	++	+	+	+	++	+	0	0	+	+/-*	+	0	+/-	0	0	+
S. epidermidis (R)	+/-	+/-	+/-	+	++	++	++	+	+	+	++	+	0	0	+	+/-	+	0	+/-	0	0	+
S. epidermidis (S)	+	+	+	+	+	+	+	+	+	+	+	+	0	0	+	+/-	+	0	+	0	0	+
S. lugdunensis	+	+	+	+	+	+	+	+	+	+	+	+	0	0	+	+/-*	+	0	0	0	0	+
S. saprophyticus	+	+	+	+	+	+	+	+	?	?	0	0	0	0	0	0	+	+	+/-	+/-	0	0
Strep. anginosis gp	+/-	+/-	+/-	+	0*	+	+	+	+	+	+	+	0	0	?	0	0	0	0	0	0	+
Strep. pyogenes (A)	?	?	?	+	+	+	+	+	+	+	+	+	0	0	?	0	+/-	0	+	0	0	+
Strep. agalactiae (B)	?	?	?	+	+	+	+	+	+	+	+	+	0	0	?	0	+/-	0	+	0	0	+
Strep. gp C,F,G	?	?	?	+	+	+	+	+	+	+	+	+	0	0	?	0	+/-	0	+	0	0	+
Strep. pneumoniae	+/-	+/-	+/-	+	+/-	+	+	+	?	?	+	+	0	0	?	0	+/-	0	+	0	0	+
Viridans Strep.	+/-	+/-	+/-	+	0*	++	++	+	+	+	+	+	0	0	?	0	?	0	0	0	0	+
Aerobic gram-pos bacilli																						
Arcanobacter. sp	++	+	+	+	+	++	+	+	?	?	+	?	0	0	0	0	0	0	0	0	0	+
C. diphtheriae	?	?	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. jeikeium	?	?	?	+*	+	++	+	+	0	0	+	?	0	0	0	0	0	0	0	0	0	?
L. monocytogenes	0	0	0	0	0	0	0	0	0	0	+	?	0	0	0	0	+	0	0	0	0	0
Nocardia sp.	?	+/-	0	?	0	0	0	0	0	0	+	?	0	0	0	0	++	0	0	0	0	0
Aerobic GNB - Enteric																						
Aeromonas sp.	+	+	0	+	0	0	0	0	0	0	0	0	+	+	0	0	+	0	?	0	0	0
C. jejuni	+/-	+/-	+/-	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. freundii	0	0	0	+*	0	0	0	0	0	0	0	0	+	+	0	0	+/-	+/-	+	+	0	0
C. koseri	0	0	0	+*	0	0	0	0	0	0	0	0	+	+	0	0	+/-	+/-	+	+	0	0
E. aerogenes	0	0	0	+*	0	0	0	0	0	0	0	0	+	+	0	0	+	+/-	+/-	+/-	0	0
E. cloacae	0	0	0	+*	0	0	0	0	0	0	0	0	+	+	0	0	+	+/-	+/-	+/-	0	0
E. coli (S)	+/-	+/-	+/-	+*	0	0	0	0	0	0	0	0	+	+	0	0	+/-	+	+	+	0	0
E. coli, Klebs ESBL	0	0	0	+*	0	0	0	0	0	0	0	0	+	+	0	0	+/-	+/-	+	+	0	0
E. coli, Klebs KPC	0	0	0	+*	0	0	0	0	0	0	0	0	+	+	0	0	+/-	+/-	+/-	+/-	0	0
E. coli, Klebs MBL	0	0	0	+	0	0	0	0	0	0	0	0	+	+	0	0	0	0	+/-	+/-	0	0
Enterics CRE, NOS	0	0	0	+*	0	0	0	0	0	0	0	0	+	+	0	0	+/-	+/-	+/-	+/-	0	0
K. oxytoca	0	+/-	0	+	0	0	0	0	0	0	0	0	+	+	0	0	+/-	+	+/-	+/-	0	0
K. pneumoniae (S)	0	+/-	0	+*	0	0	0	0	0	0	0	0	+	+	0	0	+/-	+	+/-	+/-	0	0
Morganella sp.	0	0	0	?*	0	0	0	0	0	0	0	0	0	0	0	0	+/-	0	0	0	0	0
P. mirabilis	0	+/-	0	+	0	0	0	0	0	0	0	0	0	0	0	0	+/-	0	+	+	0	0
P. vulgaris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+/-	0	+/-	+/-	0	0
Providencia sp.	0	0	0	?	0	0	0	0	0	0	0	0	0	0	0	0	+/-	0	+	+	0	0
Salmonella sp.	+/-	+/-	0	+*	0	0	0	0	0	0	0	0	0	0	0	0	+/-	0	0	0	0	0
Serratia sp.	0	0	0	+*	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+/-	+/-	0	0
Shigella sp.	+/-	+/-	0	+*	0	0	0	0	0	0	0	0	0	0	0	0	+/-	0	0	0	0	0
Y. enterolitica	+	?	?	?	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0	0	0	0
Aerobic GNB - Non-enteric																						
Bartonella sp.	++	+	+	?	0	0	0	0	0	0	0	0	0	0	0	+/-*	0	0	0	0	0	0
B. pertussis	?	?	?	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0	0	0	0
B. burgdoferi	++	+	+	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brucella sp.	+	+	+	?	0	0	0	0	0	0	0	0	0	0	0	+/-*	+	0	0	0	0	0
Capnocytophagia	+	+	+	?	0	0	0	0	0	0	0	0	0	0	0	0	+/-	0	0	0	0	0
C. burnetii	++	+	+	?	0	0	0	0	0	0	0	0	0	0	0	+/-*	+	0	0	0	0	0
Ehrlichia, Anaplas	++	+	+	?	0	0	0	0	0	0	0	0	0	0	0	+/-*	0	0	0	0	0	0
Eikenella sp	+	+	+	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. tularensis	++	+	+	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H. ducreyi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H. influenzae	+	+	+	+	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	0	0	0
Kingella sp.	+	+	+	+	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0	0	0	0
K. granulomatis	++	+	+	?	0	0	0	0	0	0	0	0	0	0	0	0	++	0	0	0	0	0
Legionella sp.	+	+	+	+	0	0	0	0	0	0	0	0	0	0	0	+/-*	+	0	0	0	0	0
Leptospira sp.	++	+	+	?	0	0	0	0	0	0	0	0	0	0	0	0	?	0	0	0	0	0
M. catarrhalis	+	+	+	?	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0	0	0	0
N. gonorrhoeae	+/-	+/-	+/-	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N. meningitidis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P. multocida	+	+	+	+	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0	0	0	0
R. ricketsii	++	+	+	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T. pallidum	+	?	+*	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
V. cholera	+	+	+	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
V. parahemolyticus	+	?	+*	?	0	0	0	0	0	0	0	0	0	0	0	0	?	0	0	0	0	0
V. vulnificus	+	+	+*	?	0	0	0	0	0	0	0	0	0	0	0	0	?	0	0	0	0	0
Y. pestis	+	+	+	?	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0	0	0	0
Aerobic GNB non-fermenter																						
A. baumanii	0	+/-	+/-	+*	0	0	0	0	0	0	0	0	+	+	0	0	+/-	0	0	0	0	0
B. cepacia	0	+/-	+/-	0	0	0	0	0	0	0	0	0	0	0	0	0	+/-	0	0	0	0	0
P. aeruginosa	0	0	0	0	0	0	0	0	0	0	0	0	+	+	0	0	0	0	+/-	+/-	0	0
S. maltophilia	+	+	0	+*	0	0	0	0	0	0	0	0	+	+	0	0	++	0	0	0	0	0
Aerobic - cell wall-deficient																						
C. trachomatis	++	+	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydophila sp.	++	+	+	+	0	0	0	0	0	0	0	0	0	0	0	+/-*	0	0	0	0	0	0
M. genitalium	+/-	+/-	+/-	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. pneumoniae	++	++	++	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U. urealyticum	++	+	+	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anaerobic GNB																						
B. fragilis	+/-	+/-	+/-	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	++	0
F. necrophorum	+	+	+	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	++	0
P. melaninogenica	+	+	+	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	++	0
Anaerobic gram-positive																						
Actinomyces sp.	+	+	+	?	0	?	0	?	0	0	+	?	0	0	0	0	0	0	0	0	0	+
C. difficille	0	0	0	0	0	++	0	0	0	0	0	0	0	0	0	0	0	0	0	0	++	0
Clostridum sp.	+	+	+	+	+/-	+	+	+	+	+	+	0	0	0	0	0	0	0	0	0	+	+
P. acnes	+	+	+	+	+	+	+	+	+	+	0	0	0	0	0	0	+/-	0	0	0	0	0
Peptostreptococci	+	+	+	+	+	+	+	+	+	+	+	?	0	0	0	0	0	0	+	0	+/-	?

SANFORD GUIDE — Antifungal Drugs

Antifungal Drugs	Fluconazole	Itraconazole	Voriconazole	Posaconazole	Isavuconazole	Anidulafungin	Caspofungin	Micafungin	Amphotericin B
Fungi									
Aspergilllus fumigatus	0	+/-	++	+	++	+/-	+/-	+/-	+
Aspergillus terreus	0	+/-	++	+	++	+/-	+/-	+/-	0
Aspergiullus flavus	0	+/-	++	+	++	+/-	+/-	+/-	+
Candida albicans	++	+	+	+	+	++	++	++	+
Candida dubliniensis	++	+	+	+	+	++	++	++	++
Candida glabrata	+/-	+/-	+/-	+/-	+/-	++	++	++	++
Candida guilliermondii	++	++	++	++	+	++	++	++	++
Candida krusei	0	0	+	+	+	++	++	++	++
Candida lusitaniae	++	+	+	+	+	++	++	++	0
Candida parapsilosis	++	+	+	+	+	+	+	+	++
Candida tropicalis	++	+	+	+	+	++	++	++	++
Cryptococcus sp.	++	+	+	+	+	0	0	0	++
Dematiaceous molds	0	++	++	+	+	+/-	+/-	+/-	+
Fusarium sp.	0	+/-	+/-	+/-	+/-	0	0	0	+/-
Mucormycosis	0	0	0	+	+	0	0	0	++
Scedo apiospermum	0	0	+	+/-	+/-	0	0	0	0
Lomentospora prolificans	0	0	0	0	0	0	0	0	0
Trichosporon spp.	+/-	+	+	+	+	0	0	0	+
Dimorphic Fungi									
Blastomyces	+/-	++	+	+	+	0	0	0	++
Coccidioides	++	++	+	+	+	0	0	0	++
Histoplasma	+/-	++	+	+	+	0	0	0	++
Sporothrix	+/-	++	+	+	+	0	0	0	++

SANFORD GUIDE — Viruses

Viruses	Adenovirus	BK Virus	Cytomegalovirus	Hepatitis B	Hepatitis C	Herpes simplex	HPV	Influenza A	Influenza B	JC Virus / PML	RSV	Varicella-zoster
Hepatitis B												
Adefovir	NA	NA	NA	++	NA	NA	NA	NA	NA	NA	NA	NA
Emtricitabine	NA	NA	NA	+/-*	NA	NA	NA	NA	NA	NA	NA	NA
Entecavir	NA	NA	NA	++	NA	NA	NA	NA	NA	NA	NA	NA
Lamivudine	NA	NA	NA	+/-*	NA	NA	NA	NA	NA	NA	NA	NA
Telbivudine	NA	NA	NA	+/-*	NA	NA	NA	NA	NA	NA	NA	NA
Tenofovir	NA	NA	NA	++	NA	+/-*	NA	NA	NA	NA	NA	NA
Hepatitis C												
Daclatasvir	NA	NA	NA	NA	++	NA	NA	NA	NA	NA	NA	NA
Dasabuvir	NA	NA	NA	NA	++	NA	NA	NA	NA	NA	NA	NA
Elbasir	NA	NA	NA	NA	++	NA	NA	NA	NA	NA	NA	NA
Grazoprevir	NA	NA	NA	NA	++	NA	NA	NA	NA	NA	NA	NA
Interferon alfa, peg	NA	NA	NA	++	+*	NA	NA	NA	NA	NA	NA	NA
Ledipasvir	NA	NA	NA	NA	++	NA	NA	NA	NA	NA	NA	NA
Ombitasvir	NA	NA	NA	NA	++	NA	NA	NA	NA	NA	NA	NA
Paritaprevir	NA	NA	NA	NA	++	NA	NA	NA	NA	NA	NA	NA
Ribavirin	+/-	NA	NA	0	+*	NA	NA	NA	NA	NA	+/-*	NA
Simeprevir	NA	NA	NA	NA	+*	NA	NA	NA	NA	NA	NA	NA
Sofosbuvir	NA	NA	NA	NA	++	NA	NA	NA	NA	NA	NA	NA
Velpatasvir	NA	NA	NA	NA	++	NA	NA	NA	NA	NA	NA	NA
Voxilaprevir	NA	NA	NA	NA	++	NA	NA	NA	NA	NA	NA	NA
Influenza												
Amantadine	NA	NA	NA	NA	NA	NA	NA	+/-*	+/-*	NA	NA	NA
Oseltamivir	NA	NA	NA	NA	NA	NA	NA	++	+	NA	NA	NA
Peramivir	NA	NA	NA	NA	NA	NA	NA	+*	+*	NA	NA	NA
Rimantadine	NA	NA	NA	NA	NA	NA	NA	+/-*	+/-*	NA	NA	NA
Zanamavir	NA	NA	NA	NA	NA	NA	NA	++	+	NA	NA	NA
Herpes, CMV, VZV, misc.												
Acyclovir	NA	NA	0	NA	NA	++	NA	NA	NA	NA	NA	+
Cidofovir	+	+	++	NA	NA	+*	NA	NA	NA	+*	NA	+
Famciclovir	NA	NA	0	NA	NA	++	NA	NA	NA	NA	NA	+
Foscarnet	NA	NA	++	NA	NA	+	NA	NA	NA	NA	NA	+
Ganciclovir	+/-	NA	++	NA	NA	+	NA	NA	NA	NA	NA	+
Letermovir	NA	NA	++*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Valacyclovir	NA	NA	0	NA	NA	++	NA	NA	NA	NA	NA	++
Valganciclovir	+/-	NA	++	NA	NA	+	NA	NA	NA	NA	NA	+
Topical Agents												
Imiquimod	NA	NA	NA	NA	NA	NA	++	NA	NA	NA	NA	NA
Penciclovir	NA	NA	0	NA	NA	+*	NA	NA	NA	NA	NA	0
Podofilox	NA	NA	NA	NA	NA	NA	++	NA	NA	NA	NA	NA
Sinecatechins	NA	NA	NA	NA	NA	NA	+	NA	NA	NA	NA	NA
Trifluridine	NA	NA	NA	NA	NA	+*	NA	NA	NA	NA	NA	NA

Antibacterials Notes:

- Amikacin, Nocardia sp., Use in combination
- Amoxicillin, C. trachomatis, Recommended only as alternate for pregnant women, due to concern that bacteria persist rather than being killed.
- Ampicillin, C. trachomatis, Recommended only as alternate for pregnant women, due to concern that bacteria persist rather than being killed.
- Azithromycin, E. coli (S), Enterohemorrhagic E.coli are susceptible
- Azithromycin, M. genitalium, resistance reported and emerging to all antibiotics including fluoroquinolones
- Azithromycin, U. urealyticum, Link with STI unclear. Some data suggests in patients with symptoms longer than 3 weeks, 6 days 500mg qd more efficacious than 1g single dose.
- Aztreonam, E. coli, Klebs MBL, Aztreonam is not hydrolyzed by MBLs, but MBL+ strains often have other enzymes that can.
- Ceftazidime, Y. enterolitica, Clinical failures reported
- Ceftriaxone, E. faecalis (S) , Use only in combination with ampicillin.
- Ceftriaxone, F. necrophorum, Use in combination with metronidazole
- Ceftriaxone, Nocardia sp., May be used as part of combination therapy; never used as monotherapy
- Cefuroxime, Y. enterolitica, Clinical failures reported
- Ciprofloxacin, E. faecalis (S) , Most strains +/-, can be used in UTI, not in systemic infection.
- Daptomycin, S. aureus CA-MRSA, Do not use for pneumonia
- Daptomycin, S. aureus HA-MRSA, Do not use for pneumonia
- Daptomycin, Strep. anginosis gp, Despite in vitro susceptibility, resistance to daptomcyin emerges rapidly in viridans group streptococci
- Daptomycin, Viridans Strep., Despite in vitro susceptibility, resistance to daptomcyin emerges rapidly in viridans group streptococci
- Doripenem, A. baumanii, Do not use Doripenem to treat any kind of pneumonia
- Doripenem, E. coli (S), Do not use Doripenem to treat any kind of pneumonia
- Doripenem, E. coli, Klebs ESBL, Do not use Doripenem to treat any kind of pneumonia
- Doripenem, K. pneumoniae (S), Do not use Doripenem to treat any kind of pneumonia
- Doripenem, P. aeruginosa, Do not use Doripenem to treat any kind of pneumonia
- Doripenem, S. aureus MSSA, Do not use Doripenem to treat any kind of pneumonia.
- Doripenem, Strep. pneumoniae, Do not use Doripenem to treat any kind of pneumonia.
- Gatifloxacin, C. burnetii, FQs potential alternative if CNS infected as FQs have good CNS penetration
- Gatifloxacin, M. genitalium, resistance reported and emerging to all antibiotics including fluoroquinolones
- Gemifloxacin, C. burnetii, FQs alternative if CNS infected.
- Gemifloxacin, N. gonorrhoeae, Used in combination with azithro for ceftriaxone resistant strains
- Gentamicin, Bartonella sp., In combination with doxycycline or azithromycin
- Gentamicin, E. faecalis (S), Use only in combination.
- Gentamicin, E. faecalis (VRE), Use only in combination
- Gentamicin, E. faecium (S), Use only in combination.
- Gentamicin, E. faecium (VRE), Use only in combination
- Gentamicin, F. tularensis, Streptomycin is drug of choice
- Gentamicin, L. monocytogenes, Use only in combination
- Gentamicin, S. aureus CA-MRSA, Use only in combination
- Gentamicin, S. aureus HA-MRSA, Use only in combination
- Gentamicin, S. aureus MSSA, Use only in combination
- Gentamicin, S. epidermidis (R), Use only in combination
- Gentamicin, S. epidermidis (S), Use only in combination
- Gentamicin, S. lugdunensis, Use only in combination
- Gentamicin, Staph coag-neg (R), Use only in combination
- Gentamicin, Staph coag-neg (S), Use only in combination
- Gentamicin, Strep. anginosis gp, Use only in combination
- Gentamicin, Strep. gp C,F,G, Use only in combination for Group B strep
- Gentamicin, Viridans Strep., Use only in combination
- Imipenem, Morganella sp., Currently recommended breakpoints for imipenem have significantly reduced susceptibility rates for imipenem compared to other carbapenems. The clinical significance of this is not known but in absence of clinical data of efficacy use of another carbapenem should be considered for infections caused by this organism.
- Imipenem, P. mirabilis, Currently recommended breakpoints for imipenem have significantly reduced susceptibility rates for imipenem compared to other carbapenems. The clinical significance of this is not known but in absence of clinical data of efficacy use of another carbapenem should be considered for infections caused by this organism.
- Imipenem, P. vulgaris, Currently recommended breakpoints for imipenem have significantly reduced susceptibility rates for imipenem compared to other carbapenems. The clinical significance of this is not known but in absence of clinical data of efficacy use of another carbapenem should be considered for infections caused by this organism.
- Imipenem, Providencia sp., Currently recommended breakpoints for imipenem have significantly reduced susceptibility rates for imipenem compared to other carbapenems. The clinical significance of this is not known but in absence of clinical data of efficacy use of another carbapenem should be considered for infections caused by this organism.
- Levofloxacin, Ehrlichia, Anaplas, Levo active in vitro in one small study
- Moxifloxacin, M. genitalium, resistance reported and emerging to all antibiotics including fluoroquinolone
- Prulifloxacin, E. faecalis (S) , Most strains +/-, can be used in UTI, not in systemic infection.
- Rif (comb), Bartonella sp., In combination with doxycycline
- Rif (comb), Brucella sp., In combination
- Rif (comb), C. burnetii, In combination
- Rif (comb), Chlamydophila sp., In combination
- Rif (comb), E. faecalis (S) , In combination.
- Rif (comb), E. faecalis (VRE), In combination
- Rif (comb), E. faecium (S), In combination.
- Rif (comb), E. faecium (VRE), In combination
- Rif (comb), Ehrlichia, Anaplas, In combination
- Rif (comb), Legionella sp., In combination
- Rif (comb), S. aureus CA-MRSA, In combination
- Rif (comb), S. aureus HA-MRSA, In combination
- Rif (comb), S. aureus MSSA, In combination
- Rif (comb), S. lugdunensis, In combination
- Rif (comb), Staph coag-neg (R), In combination
- Rif (comb), Staph coag-neg (S), In combination
- Tetracycline, T. pallidum, Not recommended as first line therapy, but a possible alternative in the penicillin-allergic patient
- Tetracycline, V. parahemolyticus, Resistance rates vary markedly geographically and exceed 20% in some countries.
- Tetracycline, V. vulnificus, Resistance rates vary markedly geographically and exceed 20% in some countries.
- Tigecycline, A. baumanii, Use only if no other treatment option. Use in combination
- Tigecycline, C. freundii, FDA recommends use only if no other option
- Tigecycline, C. jeikeium, Do not use unless no other option
- Tigecycline, C. koseri, FDA recommends use only if no other option
- Tigecycline, E. aerogenes, FDA suggests avoidance unless no other treatment option
- Tigecycline, E. cloacae, FDA recommends use only if no other option
- Tigecycline, E. coli (S), Use only if no other treatment option
- Tigecycline, E. coli, Klebs ESBL, Use only if no other options
- Tigecycline, E. coli, Klebs KPC, Use only if no other option
- Tigecycline, Enterics CRE, NOS, Use only if no other option
- Tigecycline, K. pneumoniae (S), Use only if no other option
- Tigecycline, Morganella sp., Use only if no other option
- Tigecycline, S. maltophilia, Do not use unless no other treatment options
- Tigecycline, Salmonella sp., Use only if no other treatment option
- Tigecycline, Serratia sp., Use only if no other treatment option
- Tigecycline, Shigella sp., Use only if no other treatment option

Antiviral Notes:

- Hepatitis B , Emtricitabine, Do not use as mono therapy. High level resistance occurs when emtricitabine is used alone
- Hepatitis B , Lamivudine, Do not use as mono therapy. High level resistance occurs when lamivudine is used alone against HBV
- Hepatitis B , Telbivudine, Do not use as mono therapy. High level resistance occurs when telbivudine is used alone
- Herpes simplex , Tenofovir, Some evidence of activity against HSV
- Hepatitis C , Interferon alfa, peg, No longer 1st line therapy
- Hepatitis C , Ribavirin, No longer 1st line therapy
- Hepatitis C , Simeprevir, No longer preferred first line therapy except in special circumstances
- RSV , Ribavirin, Minimal Activity. Palivizumab is an option for prophylaxis in immunocompromised patients
- Influenza A , Amantadine, High level resistance H1N1 (non-swine) in 2008; Swine H1N1 susceptible
- Influenza B , Amantadine, Influenza B is intrinsically resistant
- Influenza A , Peramivir, Good option for ICU patients who cannot absorb oral agents
- Influenza B , Peramivir, Good option for ICU patients who cannot absorb oral agents
- Influenza A , Rimantadine, High level resistance H1N1 (non-swine) in 2008; Swine H1N1 susceptible
- Influenza B , Rimantadine, Influenza B is intrinsically resistant
- Herpes simplex , Cidofovir, Best option when ACV resistance is present
- JC Virus / PML , Cidofovir, Data support its use is inconclusive. When used properly, with appropriate pre-medication with probenecid and fluids, appears to work well vs. JC virus CNS disease
- Cytomegalovirus , Letermovir, CMV prophylaxis in transplant pts
- Herpes simplex , Penciclovir, Topical use only
- Herpes simplex , Trifluridine, For ophthalmic use

Recommended (++)
Agent is a first line therapy: reliably active in vitro, clinically effective, guideline recommended, recommended as a first-line agent or acceptable alternative agent in the Sanford Guide.

Active (+)
Agent is a potential alternative agent (active in vitro, possesses class activity comparable to known effective agents or a therapeutically interchangeable agents and hence likely to be clinically effective, but second line due to overly broad spectrum, toxicity, limited clinical experience, or paucity of direct evidence of effectiveness).

Variable (+/-)
Variable activity such that the agent, although clinically effective in some settings or types of infections is not reliably effective in others, or should be used in combination with another agent, and/or its efficacy is limited by resistance which has been associated with treatment failure.

Not Recommended (0)
Agent is a poor alternative to other agents because resistance to likely to be present or occur, due to poor drug penetration to site of infection or an unfavorable toxicity profile, or limited or anecdotal clinical data to support effectiveness.

Insufficient Data (?)
Insufficient data to recommend use.

Not Applicable (NA)
Agent has no activity against this pathogen.

Editorial Note: The data provided are intended to serve as a general guide to antibacterial usefulness based on treatment guidelines and recommendations, in vitro activity, predominant patterns of susceptibility or resistance and/or demonstrated clinical effectiveness. Variability in resistance patterns due to regional differences or as a consequent of clinical setting (e.g., community-onset vs. ICU-acquired infection) should be taken into account when using this table because activities of certain agents can differ significantly from what is shown in the table, which are by necessity based on aggregate information.

Antimicrobial Therapy

أبو الريش الياباني
مستشفى الأطفال الجامعي التخصصي
قسم الصيدلة الإكلينيكية

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