

# ANTIBIOTIC RESISTANCE GENES REFERENCE GUIDE

Resistance genes are mutations identified through the sequencing of known resistant bacterial strains that confer resistance to corresponding antibiotic therapies.

Presence of antimicrobial resistance genes may effect microbial susceptibility to corresponding antibiotics.

**Administration Mode:** po = oral, IV = intravenous, IM = intramuscular, OP = ophthalmic, OT = otic.

Some antibiotics might not be available in the US (see [www.pdr.net](http://www.pdr.net), [www.drugs.com](http://www.drugs.com), or [www.rxlist.com](http://www.rxlist.com) for current information).

Antibiotic Class	Antibiotic (Administration)	Brand Names	Resistance Genes										
			ermB, ermC, mefA	tet B, tet M	dfr (A1, A5), sul (1, 2)	VanA, VanB	mecA	SHV, KPC Groups	CTX-M1 (15), M2 (2), M9 (9), M8/25 Groups	IMP, NDM, VIM Groups	ACT, MIR, FOX, ACC Groups	OXA-48, 51 Groups	qnrA1, qnrA2, qnrB2
Penicillins	Penicillin G (IV/IM)	Penicillin G					◆	◆	◆	◆	◆	◆	
	Penicillin VK (po)	Pen VK					◆	◆	◆	◆	◆	◆	
	Nafcillin (IV/IM)	Nafcillin					◆	◆	◆	◆	◆	◆	
	Oxacillin (IV/IM)	Oxacillin					◆	◆	◆	◆	◆	◆	
	Cloxacillin (po)	Cloxapen					◆	◆	◆	◆	◆	◆	
	Dicloxacillin (po)	Dynapen					◆	◆	◆	◆	◆	◆	
	Ampicillin (IV/IM/po)	Ampicillin					◆	◆	◆	◆	◆	◆	
	Amoxicillin (po)	Amoxil					◆	◆	◆	◆	◆	◆	
	Amoxicillin Clavulanic acid (po)	Augmentin					◆	◆	◆	◆	◆	◆	
	Ampicillin Sulbactam (IV/IM)	Unasyn					◆	◆	◆	◆	◆	◆	
Piperacillin Tazobactam (IV)	Zosyn					◆	◆	◆	◆	◆	◆		
Carbapenems	Doripenem (IV)	Doribax						◆		◆	◆		
	Ertapenem (IV/IM)	Invanz						◆		◆	◆		
	Imipenem (IV/IM)	Primaxin						◆		◆	◆		
	Meropenem (IV)	Meropenem						◆		◆	◆		
	Meropenem Vaborbactam (IV)	Vabomere						◆		◆	◆		
Monobactam	Aztreonam (IV/IM)	Azactam					◆	◆	◆		◆		
Fluoroquinolones	Ciprofloxacin (po/OT/OP/IV)	Cipro										◆	
	Delafloxacin (po/IV)	Baxdela										◆	
	Ofloxacin (po/OT/OP)	Ocuflox										◆	
	Levofloxacin (po/OP/IV)	Levaquin										◆	
	Moxifloxacin (po/OP/IV)	Avalox										◆	
	Norfloxacin (po)	Noroxin										◆	
	Gemifloxacin (po)	Factive										◆	
	Gatifloxacin (OP)	Zymaxid										◆	
Parenteral Cephalosporins	Cefazolin (IV/IM)	Ancef					◆	◆	◆	◆	◆	◆	
	Cefotetan (IV/IM)	Cefotan					◆	◆	◆	◆	◆	◆	
	Cefoxitin (IV)	Mefoxin					◆		◆	◆	◆	◆	
	Cefuroxime (po/IV/IM)	Ceftin					◆	◆	◆	◆	◆	◆	
	Cefotaxime (IV/IM)	Claforan					◆	◆	◆	◆	◆	◆	
	Ceftizoxime (IV/IM)	Cefizox					◆	◆	◆	◆	◆	◆	
	Ceftriaxone (IV/IM)	Rocephin					◆	◆	◆	◆	◆	◆	
	Ceftazidime (IV/IM)	Fortaz					◆	◆	◆	◆	◆	◆	
	Cefepime (IV/IM)	Maxipime					◆		◆	◆	◆	◆	
	Ceftazidime Avibactam (IV)	Avycaz					◆	◆	◆	◆	◆		
	Ceftaroline (IV)	Teflaro					◆		◆	◆	◆	◆	
	Ceftobiprole (IV)	Zevtera					◆	◆	◆	◆	◆	◆	
	Ceftolozane Tazobactam (IV)	Zerbaxa					◆	◆	◆	◆	◆		
	Cefiderocol (IV)	Fetroja					◆	◆	◆	◆	◆		

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Oral Cephalosporins	Cefadroxil (po)	Duricef					◆	◆	◆	◆	◆	◆	
	Cephalexin (po)	Keflex					◆	◆	◆	◆	◆	◆	
	Cefaclor (po)	Cefaclor					◆	◆	◆	◆	◆	◆	
	Cefprozil (po)	Cefzil					◆	◆	◆	◆	◆	◆	
	Cefuroxime Axetil (po/IV/IM)	Ceftin					◆	◆	◆	◆	◆	◆	
	Cefixime (po)	Suprax					◆	◆	◆	◆	◆	◆	
	Ceftibuten (po)	Cedax					◆	◆	◆	◆	◆	◆	
	Cefpodoxime (po)	Vantin					◆	◆	◆	◆	◆	◆	
	Cefdinir (po)	Omnicef					◆	◆	◆	◆	◆	◆	
Cefditoren (po)	Spectracef					◆	◆	◆	◆	◆	◆		
Lincosamide	Clindamycin (po/IV/IM)	Cleocin	◆										
Macrolides	Erythromycin (po/IV/OP)	Erythrocin	◆										
	Azithromycin (po/IV/OP)	Z-Pak	◆										
	Clarithromycin (po)	Biaxin	◆										
Tetracyclines	Doxycycline (po/IV)	Vibramycin		◆									
	Minocycline (po/IV)	Minocin		◆									
	Tetracycline (po)	Sumycin		◆									
Glycopeptides, Lipopeptide, Lipoglycopeptide	Vancomycin (po/IV/OP)	Vancomycin				◆							
DHFR inhibitor / sulfonamide combination	Trimethoprim Sulfamethoxazole (po/IV)	Bactrim			◆								

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