

organism	gene	drug_class	Antibiotic	mechanism
mixed culture bacterium AB143	SD01_15	cephalosporin	cephaloridine	antibiotic inactivation
Klebsiella pneumoniae	SHV-52	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Enterococcus faecalis	dfrF	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Escherichia coli	CTX-M-130	cephalosporin	None	antibiotic inactivation
Escherichia coli	NDM-6	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Enterobacter cloacae	ACT-35	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter calcoaceticus AB5	anitratus	penicillin beta-lactam	None	antibiotic inactivation
Alkalihalobacillus clausii	Erm(34)	macrolide antibiotic;lincosamide antibiotic;streptogramin antibiotic	erythromycin;clarithromycin;clindamycin	antibiotic target site protection
Escherichia coli	TEM-126	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;cefepime	antibiotic inactivation
uncultured bacterium BLR12	LA-12	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Morganella morganii	TEM-72	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;cefepime	antibiotic inactivation
Klebsiella oxytoca	TEM-59	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;cefepime	antibiotic inactivation
Acinetobacter baumannii	KPC-10	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter johnsonii	OXA-212	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	IMP-2	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	CMY-1	cephalosporin	None	antibiotic inactivation
Acinetobacter calcoaceticus OXA-329	OXA-329	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Serratia marcescens	ACT-10	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-371	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Staphylococcus aureus	fusB	fusidane antibiotic	fusidic acid	antibiotic target protection
Escherichia coli	CTX-M-121	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	VEB-3	monobactam;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Staphylococcus haemolyticus	lucA	lincosamide antibiotic	lincomycin;pirlimycin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-45	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-226	cephalosporin;penicillin beta-lactam	cefepime	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-155	cephalosporin	None	antibiotic inactivation

Klebsiella pneumoniae	DHA-15	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	msrE	macrolide antibiotic;streptogramin antibiotic	erythromycin	antibiotic target protection
Klebsiella oxytoca	OXY-6-3	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	FosA2	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Streptomyces fradiae	APH(3')-Va	aminoglycoside antibiotic	neomycin;ribostamycin;paromomycin	antibiotic inactivation
Pseudomonas aeruginosa	AAC(3)-Ia	aminoglycoside antibiotic	astromicin;sisomicin;gentamicin	antibiotic inactivation
Citrobacter freundii	QnrB58	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target protection;antibiotic efflux
Klebsiella pneumoniae	rmtH	aminoglycoside antibiotic	amikacin;tobramycin;arbekacin	antibiotic target protection
Klebsiella oxytoca	OXY-6-1	monobactam;cephalosporin	None	antibiotic inactivation
Salmonella enterica subspecies enterica serovar Typhimurium	modA	monobactam;Carbapenem;cephalosporin;penicillin	ceftazidime;cefepime	antibiotic efflux
Escherichia coli str. K-12 substr. W3110	subR	nucleoside antibiotic;disinfecting agents and antiseptics	kanamycin	antibiotic efflux
Citrobacter freundii	CMY-114	cephalosporin	None	antibiotic inactivation
Ralstonia pickettii	OXA-60	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-90	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Serratia marcescens	SME-2	carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	AAC(3)-IIIc	aminoglycoside antibiotic	gentamicin A;gentamicin	antibiotic inactivation
Klebsiella oxytoca	OXY-2-2	monobactam;cephalosporin	None	antibiotic inactivation
Aeromonas caviae	MOX-5	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Haemophilus parainfluenzae	TEM-34	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Acinetobacter baumannii	OXA-69	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	TEM-7	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Escherichia coli	SHV-24	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	QnrB47	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target protection;antibiotic efflux
Enterobacter cloacae	OXA-256	cephalosporin;penicillin beta-lactam	cefazolin	antibiotic inactivation
Aeromonas hydrophila	QnrS6	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target protection;antibiotic efflux
Acinetobacter calcoaceticus	OXA-330	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	CMY-42	cephalosporin	cefoxitin;ceftazidime	antibiotic inactivation

Klebsiella pneumoniae	AAC(6')-Ib	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin	antibiotic inactivation
Citrobacter braakii	CMY-70	cephalosporin	None	antibiotic inactivation
uncultured bacterium	GES-21	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-41	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-391	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Klebsiella pneumoniae	TEM-132	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Salmonella enterica subspecies A serovar Agona	aacA25	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Klebsiella pneumoniae subspecies pneumoniae	NDM-1	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Citrobacter freundii	QnrB66	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin;gatifloxacin	antibiotic inactivation
Klebsiella pneumoniae	SHV-42	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-35	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Klebsiella pneumoniae	SHV-18	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Streptomyces lividans	fusH	fusidane antibiotic	fusidic acid	antibiotic inactivation
Klebsiella pneumoniae	SHV-79	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	TEM-47	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Klebsiella pneumoniae	TEM-16	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-37	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Enterobacter asburiae	ACT-29	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Klebsiella oxytoca	FOX-3	cephalosporin	None	antibiotic inactivation
Proteus vulgaris	PER-4	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	GIM-1	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter soli	IMP-42	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Plasmid pWW100	TEM-102	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Staphylococcus aureus	TEM-116	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Escherichia coli	CMY-55	cephalosporin	None	antibiotic inactivation
Escherichia coli str. K-12 substr. W3110	gaoX	macrolide antibiotic;fluoroquinolone antibiotic;penicillin beta-lactam	erythromycin;ofloxacin;penicillin G	antibiotic inactivation
Escherichia coli	CTX-M-42	cephalosporin	None	antibiotic inactivation

Klebsiella pneumoniae	SHV-105	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	CMY-79	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CMY-56	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-426	carbapenem;penicillin beta-lactam	cefazidime	antibiotic inactivation
Citrobacter freundii	CMY-48	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	QnrB38	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin;gatifloxacin	antibiotic inactivation
Escherichia coli	TEM-109	monobactam;cephalosporin	cefepime;cefazidime;ceftazidime;ceftiofur	antibiotic inactivation
uncultured bacterium	TLA-2	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	SHV-12	cephalosporin;penicillin beta-lactam	ceftazidime;ceftriaxone;cefepime	antibiotic inactivation
Campylobacter jejuni	OXA-61	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	CARB-4	penicillin beta-lactam	None	antibiotic inactivation
Vibrio cholerae	catB9	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic inactivation
Klebsiella pneumoniae	TEM-43	monobactam;cephalosporin	cefepime;cefazidime;ceftazidime	antibiotic inactivation
Pseudomonas aeruginosa	PDC-8	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Saccharopolyspora erythraea	ERM-1	macrolide antibiotic;lincosamide antibiotic	erythromycin;clindamycin	antibiotic inactivation
Acinetobacter dispersus	AAC(6')-Iu	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Escherichia coli	VEB-5	monobactam;cephalosporin	None	antibiotic inactivation
Escherichia coli	dfrA13	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Proteus mirabilis	TEM-87	monobactam;cephalosporin	cefepime;cefazidime;ceftazidime	antibiotic inactivation
Citrobacter freundii	QnrB18	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin;gatifloxacin	antibiotic inactivation
uncultured bacterium BLR-1	RRA-9	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	VIM-12	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	aadA4	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Escherichia coli str. K-12	substr. MG1655	macrolide antibiotic;fluoroquinolone antibiotic	erythromycin;clindamycin;ceftazidime;cefepime	antibiotic inactivation
Klebsiella pneumoniae	VIM-34	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-64	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Chryseobacterium indologenes	ND-7	carbapenem	None	antibiotic inactivation

Klebsiella pneumoniae	SHV-182	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	TEM-183	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;betipacidam	antibiotic inactivation
Brevibacillus brevis NBR 10599	CHC-599	lincosamide antibiotic;streptogramin antibiotic	lincomycin;streptogramin A	antibiotic inactivation
Streptomyces ambofaciens	ermB	macrolide antibiotic	spiramycin	antibiotic target protection
Listeria monocytogenes	FosX	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Shigella sp. SH257	CTX-M-112	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-50	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	TEM-198	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;betipacidam	antibiotic inactivation
Klebsiella oxytoca	arr-8	rifamycin antibiotic	rifampin;rifaximin;rifabutin	antibiotic inactivation
Streptomyces sp. WAC 019338	19338	rifamycin antibiotic	rifampin;rifaximin;rifabutin	antibiotic inactivation
Serratia marcescens	SME-5	carbapenem	None	antibiotic inactivation
Escherichia coli	CMY-9	cephalosporin	None	antibiotic inactivation
Enterococcus casseliflavus	APH(2'')-Ie	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin;gentamicin A;ge	antibiotic inactivation
Citrobacter freundii	QnrB10	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enrofloxacin;gatifloxacin	antibiotic target protection
Pseudomonas fluorescens	AAC(6')-IIb	aminoglycoside antibiotic	dibekacin;sisomicin;netilmicin;bicarmycin 2;fr	antibiotic inactivation
Aeromonas jandaei	cphA7	carbapenem	None	antibiotic inactivation
Pseudomonas putida	IMP-12	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter bereziniae	OXA-229	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-98	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-27	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Klebsiella pneumoniae	SHV-92	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	aadA12	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Enterobacter cloacae	catB3	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic inactivation
Klebsiella pneumoniae	OKP-A-15	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli O157:H7 sp. Sakai	sp. Sakai	aminoglycoside antibiotic;acyclovir;antimetabolite	neomycin;kanamycin;gentamicin;to	antibiotic inactivation
Acinetobacter baumannii	AdeF	fluoroquinolone antibiotic	tetracycline antibiotic	antibiotic efflux
Staphylococcus aureus subsp. aureus N315	subsp. aureus N315	fluoroquinolone antibiotic;cephalosporin;penicillin beta-lactam	cephalosporin;penicillin beta-lactam;clindamycin;erythromycin;novob	antibiotic inactivation

Acinetobacter baumannii	TEM-195	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Pseudomonas aeruginosa	AAC(6')-Iaf	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Salmonella enterica subspecies A serovar Brederley	dhfrA2	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Micromonospora griseorubra	hlyA	macrolide antibiotic;lincosamide	styloside;erythromycin	antibiotic target alteration
Staphylococcus haemolyticus	igaA	lincosamide antibiotic;streptogramin	clindamycin;streptogramin	antibiotic target alteration
Acinetobacter baumannii	OXA-236	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Klebsiella pneumoniae	SHV-56	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-8	monobactam;carbapenem	None	antibiotic inactivation
Acinetobacter baumannii	OXA-376	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Enterococcus faecium	vanN	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Escherichia coli	VIM-29	carbapenem;cephalosporin	None	antibiotic inactivation
Micrococcus sp. SMCC C-68	Col(42)	tetracycline antibiotic	tetracycline	antibiotic efflux
Bhargavaea cecembensis	tet(45)	tetracycline antibiotic	tetracycline	antibiotic efflux
Escherichia coli	tet(E)	tetracycline antibiotic	tetracycline	antibiotic efflux
Streptomyces laurentii	tsnR	peptide antibiotic	thiostrepton	antibiotic target alteration
Citrobacter freundii	CMY-39	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VIM-17	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	fosA5	fluoroquinolone antibiotic;aminoglycoside antibiotic	ciprofloxacin;gentamicin	antibiotic inactivation
Streptomyces lividans 1326	Streptomyces lividans cmrB	phenicol antibiotic	chloramphenicol	antibiotic efflux
Enterococcus faecalis	vanR gene in vanB cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Pseudomonas aeruginosa	IMP-33	carbapenem;cephalosporin	None	antibiotic inactivation
Aeromonas caviae	IMP-19	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-78	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Pseudomonas aeruginosa	arr-4	rifamycin antibiotic	rifampin;rifaximin;rifabutin	antibiotic inactivation
Prevotella intermedia	CfxA2	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-24	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CMY-25	cephalosporin	None	antibiotic inactivation

Pseudomonas aeruginosa	dMP-51	carbapenem;cephalosporin	None	antibiotic inactivation
Shewanella algae	QnrA5	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin;gatifloxacin	antibiotic inactivation
Morganella morganii	DHA-19	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	GES-14	carbapenem;cephalosporin	None	antibiotic inactivation
Staphylococcus aureus	staph. aureus NCTC 8325	fluoroquinolone antibiotic	ciprofloxacin;gentamicin;azithromycin	antibiotic efflux
Acinetobacter baumannii	adeS	glycylcycline;tetracycline	tigecycline;tetracycline	antibiotic efflux
Brucella anthropi	OCH-1	monobactam;cephalosporin	None	antibiotic inactivation
Escherichia coli	OXA-232	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Aeromonas sobria	OXA-12	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-348	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Klebsiella pneumoniae	SHV-89	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-19	cephalosporin	None	antibiotic inactivation
Acinetobacter nosocomialis	OXA-195	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Shewanella xiamenensis	OXA-199	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-38	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-121	monobactam;cephalosporin	ceftazidime;ceftipidilam	antibiotic inactivation
Klebsiella pneumoniae	SHV-61	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-58	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-56	cephalosporin	None	antibiotic inactivation
Salmonella enterica	TEM-138	monobactam;cephalosporin	ceftazidime;ceftipidilam	antibiotic inactivation
Serratia marcescens	SRT-1	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	LEN-14	penicillin beta-lactam	None	antibiotic inactivation
Brucella anthropi	OCH-3	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-101	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-8	monobactam;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	AIM-43	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	APH(4)-Ia	aminoglycoside antibiotic	hygromycin B	antibiotic inactivation

Streptomyces wedmorensis	SfmA	phosphonic acid antibiotic	dofomycin	antibiotic inactivation
Acinetobacter baumannii	GES-12	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Citrobacter freundii	CMY-105	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-35	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-206	monobactam;cephalosporin	cefepime;cefazidime;betipacilam	antibiotic inactivation
Acinetobacter baumannii	OXA-21	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Klebsiella pneumoniae	SHV-121	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Bacillus licheniformis	bcrC	peptide antibiotic	bacitracin;bacitracin A;bacitracin B;bacitracin C	antibiotic inactivation
Klebsiella variicola	LEN-9	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	npmA	aminoglycoside antibiotic	neomycin;amikacin;ribostamycin;gentamicin;framycin	antibiotic inactivation
Klebsiella pneumoniae	OKP-A-12	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	TEM-92	monobactam;cephalosporin	cefepime;cefazidime;betipacilam	antibiotic inactivation
Citrobacter freundii	CMY-100	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	GES-3	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	MIR-2	monobactam;cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-88	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-113	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-3	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Salmonella enterica subspecies enterica serovar Typhimurium	sdhA	fluoroquinolone antibiotic	ciprofloxacin;tetracycline;chloramphenicol;beta-lactam	antibiotic inactivation
Acinetobacter baumannii	OXA-422	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter baumannii	OXA-178	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Aeromonas hydrophila	imiH	carbapenem	None	antibiotic inactivation
Klebsiella pneumoniae	LEN-21	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	QnrS8	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic inactivation
Klebsiella pneumoniae	OXA-181	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Enterobacter cloacae	ACT-19	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-137	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation

Acinetobacter baumannii	OXA-83	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Enterobacter cloacae	ACT-30	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-152	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	OXA-9	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	SHV-164	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
uncultured bacterium	cmlA5	phenicol antibiotic	chloramphenicol	antibiotic efflux
Escherichia coli	CTX-M-126	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-158	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;betipridam	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-9	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Streptomyces ambofaciens	ermZ	macrolide antibiotic;lincosamide antibiotic;streptogramin antibiotic	erythromycin	antibiotic target alteration
Campylobacter jejuni	APH(3')-VIIa	aminoglycoside antibiotic	neomycin;kanamycin A	antibiotic inactivation
Legionella pneumophila 1A01	APH(9)-Ia	aminoglycoside antibiotic	spectinomycin	antibiotic inactivation
Acinetobacter baumannii	OXA-150	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Escherichia coli	CMY-21	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-37	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-208	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Streptomyces fradiae	ErmN	macrolide antibiotic;lincosamide antibiotic;streptogramin antibiotic	erythromycin;streptogramin	antibiotic target;efflux pump
Citrobacter sp. 913	CMY-65	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VIM-8	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	dfrA24	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Enterococcus faecalis	IsaE	lincosamide antibiotic;streptogramin antibiotic	clindamycin;phlebotriptin	antibiotic target protection
Enterobacter cloacae	SHV-128	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	QnrB13	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin;praxefloxacin	antibiotic target protection
Burkholderia pseudomallei	OXA-43	penicillin beta-lactam	oxacillin	antibiotic inactivation
uncultured organism	CfxA6	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CMY-8	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	LEN-20	penicillin beta-lactam	None	antibiotic inactivation

Proteus mirabilis	CMY-4	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	QnrB36	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and ofloxacin	antibiotic inactivation
Acinetobacter baumannii	VEB-7	monobactam;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-174	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-2	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-91	monobactam;cephalosporin	cefepime;cefazidime;ceftriaxone	antibiotic inactivation
Aeromonas veronii	imiS	carbapenem	None	antibiotic inactivation
Shigella sp. SH219	CTX-M-107	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-11	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-110	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CTX-M-125	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-85	cephalosporin	None	antibiotic inactivation
Stenotrophomonas maltophilia	shlA	macrolide antibiotic;fluorotetracycline antibiotic;phenicol antibiotic	clarithromycin;erythromycin;phenicol antibiotic	antibiotic inactivation
Proteus mirabilis	TEM-11	monobactam;cephalosporin	cefepime;cefazidime;ceftriaxone	antibiotic inactivation
Klebsiella pneumoniae	SHV-162	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	TEM-67	monobactam;cephalosporin	cefepime;cefazidime;ceftriaxone	antibiotic inactivation
Escherichia coli	CMY-60	cephalosporin	None	antibiotic inactivation
Fusobacterium nucleatum	OXA-85	penicillin beta-lactam	oxacillin	antibiotic inactivation
Enterococcus faecium	vatD	streptogramin antibiotic;streptogramin A	vancomycin;teicoplanin	antibiotic inactivation
Serratia marcescens	APH(3')-Ia	aminoglycoside antibiotic	neomycin;ribostamycin;kanamycin	antibiotic inactivation
Capnocytophaga ochracea	TEM-17	monobactam;cephalosporin	cefepime;cefazidime;ceftriaxone	antibiotic inactivation
Klebsiella pneumoniae	SHV-180	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Bacteroides fragilis	CfxA4	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-145	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Enterobacter cloacae	VIM-23	carbapenem;cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-98	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	AAC(6')-29a	aminoglycoside antibiotic	dibekacin;amikacin;kanamycin	antibiotic inactivation

Escherichia coli	CMY-95	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-207	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Clostridium perfringens	ErmQ	macrolide antibiotic;lincosamides	erythromycin;streptomycin	antibiotic inactivation
Chryseobacterium indologenes	ND-1	carbapenem	None	antibiotic inactivation
Streptomyces bikiniensis	chrB	macrolide antibiotic;lincosamides	erythromycin;streptomycin	antibiotic target alteration
Klebsiella pneumoniae	SHV-32	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-101	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-118	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-35	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-78	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Chryseobacterium indologenes	ND-2	carbapenem	None	antibiotic inactivation
Acinetobacter baumannii	OXA-167	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter baumannii	OXA-143	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Escherichia coli	TEM-176	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Klebsiella pneumoniae	DHA-2	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-36	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-148	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-358	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter baumannii	OXA-366	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Klebsiella oxytoca	CTX-M-35	cephalosporin	None	antibiotic inactivation
Corynebacterium sp. L2-72659	72659	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Citrobacter freundii	QnrB54	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic inactivation
Klebsiella pneumoniae	LEN-23	penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1	fluoroquinolone antibiotic	ciprofloxacin;ofloxacin	antibiotic inactivation
Rhodococcus fascians	Rhodococcus fascians chromosome	phenicol antibiotic	chloramphenicol	antibiotic efflux
Acinetobacter baumannii	OXA-225	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Escherichia coli	GES-17	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation

Flavobacterium johnsoniae	QJM-1	carbapenem;cephalosporin	None	antibiotic inactivation
Paenibacillus popilliae ATCC 4506	vanR4506 in vanF cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Aeromonas sobria	CepS	cephalosporin	None	antibiotic inactivation
Fluoribacter gormanii	FEZ-1	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-159	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	AMP-26	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-166	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Enterococcus faecalis	vanXY gene in vanG cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Vibrio parahaemolyticus	ICAR-493	penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	PAO-1	macrolide antibiotic;fluoroquinolone antibiotic;aminoglycoside;glycopeptide;carbapenem	erythromycin;amikacin;gentamicin;ceftazidime;cefepime	antibiotic inactivation
Acinetobacter baumannii	adeC	glycylcycline;tetracycline	tigecycline;tetracycline	antibiotic efflux
Klebsiella oxytoca	OXY-1-2	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	NDM-23	carbapenem;cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-51	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	AMP-1	carbapenem;cephalosporin	None	antibiotic inactivation
Stenotrophomonas maltophilia	SHL-5	aminoglycoside antibiotic;cephalosporin;penicillin beta-lactam	gentamicin	antibiotic efflux
Pseudomonas aeruginosa	OXA-31	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Klebsiella pneumoniae	SHV-188	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Bacillus licheniformis	bcrA	peptide antibiotic	bacitracin;bacitracin A;bacitracin B	antibiotic efflux
Citrobacter freundii	QnrB23	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin	antibiotic efflux
Klebsiella oxytoca	OXY-3-1	monobactam;cephalosporin	None	antibiotic inactivation
Enterococcus faecalis	vanL	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Bacillus subtilis subsp. spizizenii str. 168	phkD	aminoglycoside antibiotic;streptomycin;neomycin;gentamicin	streptomycin;neomycin;gentamicin	antibiotic efflux
Klebsiella pneumoniae	SHV-6	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-5	monobactam;carbapenem	ceftazidime;cefepime	antibiotic inactivation
Proteus mirabilis	QnrB2	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin	antibiotic efflux
Citrobacter freundii	QnrB24	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin	antibiotic efflux

Streptomyces lincolnensis	ErmU	macrolide antibiotic;lincosamide antibiotic	lincomycin;streptogramin antibiotic	antibiotic target alteration
Pseudomonas aeruginosa	AIM-38	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	QnrB42	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Escherichia coli	TEM-112	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Salmonella enterica subspecies I serovar Enteritidis	AAC(6)-Ib	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Acinetobacter schindleri	OXA-278	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Salmonella enterica	CTX-M-151	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	TEM-155	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Citrobacter braakii	CMY-83	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-122	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Escherichia coli	CTX-M-25	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	CARB-14	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	SHV-15	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	SHV-8	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Staphylococcus aureus	qacA	fluoroquinolone antibiotic	None	antibiotic efflux
Enterobacter cloacae	MIR-3	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-21	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli str. K-12 substr. MG1655	substr. MG1655	fluoroquinolone antibiotic	enoxacin;norfloxacin	antibiotic efflux
Streptococcus agalactiae	InuC	lincosamide antibiotic	lincomycin	antibiotic inactivation
Staphylococcus aureus	mepA	glycylcycline;tetracycline antibiotic	tigecycline	antibiotic efflux
Escherichia coli	TEM-214	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Acinetobacter baumannii	OXA-148	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-147	cephalosporin	None	antibiotic inactivation
Salmonella enterica subspecies I serovar Bovismorbificans	QnrS4	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Citrobacter braakii	QnrB61	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Enterococcus casseliflavus	APH(2'')-IVa	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin;gentamicin A;gentamicin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-46	penicillin beta-lactam	oxacillin	antibiotic inactivation

Shewanella livingstonensis	SLB-1	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-1	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	TEM-2	monobactam;cephalosporin;ceftazidime;beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	FOX-10	cephalosporin	None	antibiotic inactivation
Morganella morganii	DHA-16	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-36	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Haemophilus parainfluenzae	TEM-182	monobactam;cephalosporin;ceftazidime;beta-lactam	None	antibiotic inactivation
Bacillus subtilis subsp. subtilis	haloK str. 168	aminoglycoside antibiotic	streptomycin	antibiotic inactivation
Brucella anthropi	OCH-7	monobactam;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-7	monobactam;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Salmonella enterica subsp. enterica serovar Typhimurium	monobactam T2	carbapenem;cephalosporin;penicillin beta-lactam	antibiotic efflux	phenicol antibiotic inactivation
Acinetobacter baumannii	OXA-87	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Enterobacter cloacae	ACT-25	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	LEN-16	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	OKP-A-9	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella oxytoca	OXY-4-1	monobactam;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-69	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas putida	VIM-6	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-83	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Shewanella oneidensis	OXA-54	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-10	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Enterobacter cloacae	AAC(6')-Ib-Suzhou	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin	antibiotic inactivation
Klebsiella pneumoniae	TEM-22	monobactam;cephalosporin;ceftazidime;beta-lactam	None	antibiotic inactivation
Salmonella enterica subsp. enterica serovar Typhimurium	padB	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic inactivation
Klebsiella pneumoniae	SHV-67	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Staphylococcus aureus	dfrG	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Klebsiella pneumoniae	SHV-133	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation

Acinetobacter baumannii	OXA-51	monobactam;carbapenem	penicillin beta-lactam	antibiotic inactivation
uncultured bacterium BLR15	ERA-5	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Aeromonas caviae	QnrVC4	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and ofloxacin	antibiotic target protection
Neisseria gonorrhoeae	mtrE	macrolide antibiotic	erythromycin;azithromycin	antibiotic efflux
Klebsiella pneumoniae	KPC-4	monobactam;carbapenem	cephalosporin;penicillin beta-lactam	antibiotic inactivation
Enterococcus gallinarum	vanC	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Acinetobacter baumannii	adeR	glycylcycline;tetracycline	tigecycline;tetracycline	antibiotic efflux
Acinetobacter baumannii	OXA-93	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	CTX-M-94	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-29	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-13	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Citrobacter freundii	CTX-M-30	cephalosporin	None	antibiotic inactivation
Escherichia coli	NDM-13	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Kluyvera ascorbata	CTX-M-76	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	CARB-3	penicillin beta-lactam	None	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Esm(37)Rv	macrolide antibiotic;lincosamide antibiotic;streptogramin antibiotic	erythromycin;clarithromycin;telithromycin	antibiotic target site replacement
Klebsiella pneumoniae	SHV-49	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-4	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Escherichia coli	TEM-151	monobactam;cephalosporin	cefepime;ceftriaxone	antibiotic inactivation
Escherichia coli	TEM-128	monobactam;cephalosporin	cefepime;ceftriaxone	antibiotic inactivation
Listeria monocytogenes	dfrD	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Acinetobacter baumannii	OXA-106	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Burkholderia pseudomallei K5243	kanB	macrolide antibiotic;aminoglycoside antibiotic	erythromycin;azithromycin	antibiotic efflux
Clostridium perfringens	catP	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic target alteration
Plasmid pWP113a	AAC(3)-IIa	aminoglycoside antibiotic	dibekacin;sisomicin;netilmicin	antibiotic inactivation
Pseudomonas aeruginosa	IMP-29	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	GES-9	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation

Pseudomonas aeruginosa	AIM-30	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	LEN-1	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	GES-7	carbapenem;cephalosporin	None	antibiotic inactivation
Citrobacter freundii	QnrB49	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;	antibiotic target protection
Acinetobacter baumannii	TEM-191	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Pseudomonas aeruginosa	PAO-1	None	None	antibiotic efflux
Gram-negative bacterium	TCB1	tetracycline antibiotic	tetracycline	antibiotic efflux
IncQ plasmid pIE1120	tet(Y)	tetracycline antibiotic	tetracycline	antibiotic efflux
Streptomyces fradiae	tlrB conferring tylosin resistance	streptogramin antibiotic;lincosamide antibiotic	tylosine	antibiotic target alteration
Salmonella enterica subspecies enterica serovar Typhimurium	strG1	tetracycline antibiotic	tetracycline	antibiotic target alteration
Mycobacterium fortuitum	blaF	penicillin beta-lactam	amoxicillin	antibiotic inactivation
uncultured bacterium	mphF	macrolide antibiotic	erythromycin;roxithromycin;	antibiotic inactivation
Klebsiella aerogenes	cmlB	phenicol antibiotic	chloramphenicol	antibiotic efflux
Neisseria gonorrhoeae	macB	macrolide antibiotic	erythromycin	antibiotic efflux
Klebsiella pneumoniae	SHV-156	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Salmonella enterica	TEM-188	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Myroides odoratus DSM 205	ZOS-1	carbapenem;cephalosporin	amoxicillin;piperacillin;	antibiotic inactivation
Pseudomonas aeruginosa	OPAD	fluoroquinolone antibiotic;	disinfecting agent	antibiotic efflux
Salmonella enterica subspecies enterica serovar Typhimurium	PER-2	monobactam;carbapenem	None	antibiotic inactivation
Escherichia coli	TEM-84	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Klebsiella pneumoniae	KPC-14	monobactam;carbapenem	None	antibiotic inactivation
Escherichia coli	CMY-28	cephalosporin	None	antibiotic inactivation
Enterococcus faecalis	vanR gene in vanL cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Butyrivibrio fibrisolvens	tet(W)	tetracycline antibiotic	tetracycline;doxycycline;	antibiotic target protection
Klebsiella pneumoniae	KPC-16	monobactam;carbapenem	None	antibiotic inactivation
Acinetobacter baumannii	OXA-79	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Citrobacter freundii	QnrB17	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;	antibiotic target protection

Acinetobacter baumannii	OXA-164	carbapenem;penicillin beta-lactam	ceftazidime;meropenem	antibiotic inactivation
Streptomyces fradiae	AAC(3)-VIIIa	aminoglycoside antibiotic	neomycin	antibiotic inactivation
Aeromonas media	aadA17	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Escherichia coli	CTX-M-69	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	TEM-52	monobactam;cephalosporin	ceftazidime;meropenem	antibiotic inactivation
Acinetobacter baumannii	IMP-5	carbapenem;cephalosporin	None	antibiotic inactivation
Yersinia enterocolitica (type O:3)	pesB(8)	peptide antibiotic	polymyxin B;polymyxin B1	antibiotic inactivation
Clostridium perfringens	tetA(P)	tetracycline antibiotic	tetracycline	antibiotic efflux
Klebsiella pneumoniae	FOX-1	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-9	cephalosporin	None	antibiotic inactivation
Plasmid pAZ1	dfrA3	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Escherichia coli	CTX-M-82	cephalosporin	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-19	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella variicola CAG:331	SHV-N-10	penicillin beta-lactam	None	antibiotic inactivation
Providencia stuartii	NDM-24	carbapenem;cephalosporin	None	antibiotic inactivation
Salmonella enterica subspecies I serovar Hadar	QnrA2	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic target protection
Klebsiella pneumoniae	VIM-26	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-386	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter baumannii	OXA-75	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Salmonella enterica subspecies I serovar Agona	dfrA25	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Escherichia coli	CMY-13	cephalosporin	None	antibiotic inactivation
Enterobacter asburiae	ACT-2	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-38	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Brucella anthropi	OCH-8	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-185	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	VIM-11	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-47	cephalosporin	None	antibiotic inactivation

Psychrobacter maritimus	CARB-16	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-95	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Acinetobacter baumannii	OXA-120	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Citrobacter freundii	QnrB59	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;amifloxacin	antibiotic inactivation
Escherichia coli	emrY	tetracycline antibiotic	tetracycline	antibiotic efflux
Klebsiella pneumoniae	TEM-133	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Acinetobacter baumannii	AAC-1	fluoroquinolone antibiotic;tetracycline antibiotic		antibiotic efflux
Escherichia coli	TEM-106	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Acinetobacter variabilis	AAC(6')-Is	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Acinetobacter baumannii	GES-22	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	TLA-1	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	arr-5	rifamycin antibiotic	rifampin;rifaximin;rifabutin	antibiotic inactivation
Escherichia coli	QnrB3	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;amifloxacin	antibiotic inactivation
Klebsiella pneumoniae	TEM-107	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Citrobacter freundii	CMY-71	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-117	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	QnrB28	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;amifloxacin	antibiotic inactivation
Klebsiella oxytoca	VIM-35	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	OXA-163	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter radioresistens	OXA-133	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Klebsiella pneumoniae	SHV-9	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Staphylococcus aureus	qacB	fluoroquinolone antibiotic	None	antibiotic efflux
Acinetobacter baumannii	OXA-77	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-8	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	TEM-187	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-6	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas fluorescens	IMP-22	carbapenem;cephalosporin	None	antibiotic inactivation

Klebsiella pneumoniae	SHV-82	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-32	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Proteus mirabilis	CTX-M-41	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	CTX-M-20	cephalosporin	None	antibiotic inactivation
Acinetobacter bereziniae	OXA-228	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Bacillus amyloliquefaciens	SGS-178	lincosamide antibiotic;streptogramin;aminoglycoside;streptogramin;streptogramin;streptogramin	clindamycin;streptomycin;streptomycin;streptomycin	antibiotic inactivation
Brachyspira pilosicoli	OXA-137	penicillin beta-lactam	oxacillin	antibiotic inactivation
Brachyspira pilosicoli	OXA-136	penicillin beta-lactam	oxacillin	antibiotic inactivation
Plasmid R	AAC(6')-Ia	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin;gentamicin	antibiotic inactivation
Pseudomonas aeruginosa	AAC(3)-Ib	aminoglycoside antibiotic	astromicin;sisomicin;gentamicin	antibiotic inactivation
Enterobacter asburiae	MIR-5	monobactam;cephalosporin	None	antibiotic inactivation
Citrobacter freundii	QnrB65	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic inactivation
Klebsiella pneumoniae	SHV-11	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Staphylococcus aureus	vgaA	lincosamide antibiotic;streptogramin;aminoglycoside;streptogramin;streptogramin	clindamycin;streptomycin;streptomycin	antibiotic inactivation
Klebsiella pneumoniae	TEM-110	monobactam;cephalosporin	ceftazidime;ceftazidime	antibiotic inactivation
Escherichia coli	QnrB19	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic inactivation
Klebsiella pneumoniae	FOX-7	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-100	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Salmonella enterica subspecies enterica serovar Typhimurium	aacA21	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Escherichia coli	NDM-7	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VIM-20	carbapenem;cephalosporin	None	antibiotic inactivation
Proteus mirabilis	TEM-73	monobactam;cephalosporin	ceftazidime;ceftazidime	antibiotic inactivation
Klebsiella pneumoniae	OKP-A-7	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-145	monobactam;cephalosporin	ceftazidime;ceftazidime	antibiotic inactivation
Chryseobacterium indologenes	ND-6	carbapenem	None	antibiotic inactivation
Escherichia coli	CTX-M-122	cephalosporin	None	antibiotic inactivation
Bacillus subtilis	ImrB	lincosamide antibiotic;nucleoside antibiotic	clindamycin;streptomycin	antibiotic efflux

Acinetobacter baumannii	ABES-07-0294	macrolide antibiotic;aminoglycoside antibiotic	erythromycin;gentamicin	antibiotic efflux
Citrobacter freundii	QnrB41	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and ofloxacin	antibiotic target protection
Klebsiella pneumoniae	SHV-75	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Mannheimia haemolytica	ROB-1	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	dfrA16	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Klebsiella pneumoniae	OKP-A-3	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	CMY-2	carbapenem;cephalosporin;penicillin beta-lactam	cefepime;cefazolin;ceftazidime;ceftiofur;ceftazidime;ceftiofur	antibiotic inactivation
Pasteurella multocida	dfrA20	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Pseudomonas aeruginosa	AIM-16	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli O139:H28	NDM-1GE24377A	phosphonic acid antibiotic	fosfomycin	antibiotic efflux
Acinetobacter baumannii	OXA-385	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-96	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Enterobacter asburiae	IMI-2	carbapenem	None	antibiotic inactivation
Escherichia coli	TEM-201	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;cefepime;ceftriaxone	antibiotic inactivation
Acinetobacter lwoffii	OXA-361	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	emrK	tetracycline antibiotic	tetracycline	antibiotic efflux
Klebsiella pneumoniae	SHV-153	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-328	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	PDC-7	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Proteus mirabilis	VEB-4	monobactam;cephalosporin	None	antibiotic inactivation
Shewanella frigidimarina	SFB-1	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter johnsonii	OXA-211	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	NDM-8	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-147	cephalosporin;penicillin beta-lactam	cefepime	antibiotic inactivation
Enterococcus faecalis ATCC 29212	ECG-29212	disinfecting agents and antiseptics	disinfectant	antibiotic efflux
Enterobacter cloacae	SHV-30	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	OXA-320	cephalosporin;penicillin beta-lactam	cefepime	antibiotic inactivation

Bacteroides fragilis	ErmF	macrolide antibiotic;lincosamides antibiotic	erythromycin;clindamycin	antibiotic target replacement
Enterobacter cloacae	DHA-7	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-68	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella pneumoniae	QnrB46	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target protection
Pseudomonas aeruginosa	catB10	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic inactivation
Pseudomonas aeruginosa	AIM-28	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	adeJ	macrolide antibiotic;fluoroquinolone antibiotic	telavancin;erflobacin;incosarelix	antibiotic target replacement
Klebsiella pneumoniae	TEM-21	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Acinetobacter bereziniae	OXA-355	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Stenotrophomonas maltophilia	shlE	macrolide antibiotic;fluoroquinolone antibiotic	telavancin;erflobacin;incosarelix	antibiotic target replacement
Acinetobacter calcoaceticus	OXA-332	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	CFE-1	cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-6-2	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-16	carbapenem;cephalosporin	None	antibiotic inactivation
Vibrio cholerae	CARB-6	penicillin beta-lactam	None	antibiotic inactivation
Pasteurella multocida 3695	ISA25	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Klebsiella oxytoca	OXY-2-5	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-1	monobactam;cephalosporin	None	antibiotic inactivation
Staphylococcus aureus subsp. aureus JH9	ubpR	penicillin beta-lactam	methicillin	antibiotic target replacement
Acinetobacter calcoaceticus	OXA-349	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Proteus mirabilis	TEM-89	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Klebsiella pneumoniae	GES-4	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-115	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	aadA	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Kitasatospora aureofaciens	trr3	tetracycline antibiotic	tetracycline	antibiotic efflux
Escherichia coli	SAT-3	nucleoside antibiotic	streptothricin	antibiotic inactivation
Aeromonas salmonicida subsp. salmonicida	sls(S1)	tetracycline antibiotic	tetracycline	antibiotic efflux

Escherichia coli str. K-12	spcA str. W3110	peptide antibiotic	polymyxin B	antibiotic target alteration
Clostridium butyricum	Clostridium butyricum cat	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic inactivation
Streptomyces rimosus	AAC(3)-VIIa	aminoglycoside antibiotic	paromomycin	antibiotic inactivation
Escherichia coli	dfrA26	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Achromobacter xylosoxidans	OXA-243	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-219	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Escherichia coli str. K-12	AutS str. MG1655	fluoroquinolone antibiotic	ciprofloxacin;gatifloxacin;levofloxacin	antibiotic inactivation
Enterococcus faecalis	vanY gene in vanB cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecalis	vanXY gene in vanE cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecalis V582	vanV gene in vanB cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Klebsiella pneumoniae	SHV-142	cephalosporin;penicillin beta-lactam	Meropenem	antibiotic inactivation
Citrobacter sp. OTESBL01	CMY-104	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	AAC(6')-29b	aminoglycoside antibiotic	dibekacin;amikacin;kanamycin	antibiotic inactivation
Klebsiella pneumoniae	VIM-5	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter haemolyticus	TEM-162	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Enterobacter cloacae	ACT-36	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-43	cephalosporin	None	antibiotic inactivation
Morganella morganii	TEM-10	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Escherichia coli	CTX-M-34	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	ACT-1	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-65	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	MIR-12	monobactam;cephalosporin	None	antibiotic inactivation
Chryseobacterium indologenes	ND-3	carbapenem	None	antibiotic inactivation
Escherichia coli	CTX-M-137	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-27	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-48	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-15	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation

Acinetobacter baumannii	OXA-25	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	AAC(6')-Ih	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin;netilmicin;gentamicin	antibiotic inactivation
Acinetobacter baumannii	OXA-171	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	PDC-10	monobactam;carbapenem	ceftazidime	antibiotic inactivation
Klebsiella pneumoniae	SHV-108	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CMY-54	cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	TEM-120	monobactam;cephalosporin	ceftazidime;betipicilam	antibiotic inactivation
Salmonella enterica subspecies I serovar Stanley	QnrS4	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic inactivation
Citrobacter freundii	CMY-75	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-37	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter sp. enriched from clone 8407	OXA-259	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-162	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Micromonospora chalybeata	APH(3')-Vc	aminoglycoside antibiotic	neomycin;ribostamycin;paromomycin	antibiotic inactivation
Klebsiella pneumoniae	MOX-2	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-123	cephalosporin	None	antibiotic inactivation
uncultured bacterium	OXA-347	penicillin beta-lactam	oxacillin	antibiotic inactivation
Proteus mirabilis	TEM-159	monobactam;cephalosporin	ceftazidime;betipicilam	antibiotic inactivation
Ralstonia pickettii	OXA-22	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Escherichia coli	CTX-M-40	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-66	cephalosporin	None	antibiotic inactivation
Staphylococcus warneri	cfrA	lincosamide antibiotic;streptogramin antibiotic	clindamycin;erythromycin;azithromycin;clarithromycin	antibiotic inactivation
Pasteurella multocida	Erm(42)	macrolide antibiotic;lincosamide antibiotic;streptogramin antibiotic	erythromycin;azithromycin;clarithromycin	antibiotic inactivation
Pseudomonas aeruginosa	TEM-205	monobactam;cephalosporin	ceftazidime;betipicilam	antibiotic inactivation
Klebsiella pneumoniae	QnrS9	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic inactivation
Enterobacter cloacae	ACT-31	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	SHV-129	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-98	cephalosporin	None	antibiotic inactivation

Streptomyces venezuelae	ATCC 10712	phenicol antibiotic	chloramphenicol	antibiotic inactivation
Citrobacter freundii	CMY-116	cephalosporin	None	antibiotic inactivation
Streptomyces hygroscopicus	APH(7'')-Ia	aminoglycoside antibiotic	hygromycin B	antibiotic inactivation
Pseudomonas aeruginosa	AIM-1	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-49	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	TEM-213	monobactam;cephalosporin	cefepime;cefazidime;betipacidam	antibiotic inactivation
uncultured bacterium	dfrB6	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Klebsiella pneumoniae	SHV-62	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pasteurella multocida	catB2	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-81	cephalosporin	None	antibiotic inactivation
Escherichia coli	dfrB1	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Pseudomonas aeruginosa	PDC-3	monobactam;carbapenem	cefepime;cefazidime;ceftriaxone;cefepime;cefazidime;cefepime;cefepime	antibiotic inactivation
Citrobacter freundii	QnrB32	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;ofloxacin	antibiotic inactivation
Escherichia coli	CTX-M-100	cephalosporin	None	antibiotic inactivation
uncultured bacterium BLR1	RRA-8	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CMY-33	cephalosporin	None	antibiotic inactivation
Bacillus cereus	Bcl	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-28	cephalosporin;penicillin beta-lactam	cefepime	antibiotic inactivation
Klebsiella pneumoniae	SHV-72	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter genomospecies 1	AAC(6'')-Ij	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Acinetobacter baumannii	GES-11	carbapenem;cephalosporin	None	antibiotic inactivation
Staphylococcus aureus subsp. aureus	PCP beta-lactamase	penicillin beta-lactam	None	antibiotic inactivation
Streptomyces fradiae	ErmS	macrolide antibiotic;lincosamide	erythromycin;clindamycin	antibiotic inactivation
Klebsiella pneumoniae	TEM-192	monobactam;cephalosporin	cefepime;cefazidime;betipacidam	antibiotic inactivation
Citrobacter amalonaticus	CTX-M-8	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	AAC(6'')-IIc	aminoglycoside antibiotic	dibekacin;sisomicin;netilmicin	antibiotic inactivation
Acinetobacter baumannii	IMP-11	carbapenem;cephalosporin	None	antibiotic inactivation

Acinetobacter baumannii	OXA-237	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella pneumoniae	NDM-25	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-30	monobactam;cephalosporin;penicillin beta-lactam	ciprofloxacin;levofloxacin;amoxicillin;ceftazidime;ceftriaxone	antibiotic inactivation
Pseudomonas aeruginosa	arr-7	rifamycin antibiotic	rifampin;rifaximin;rifabutin	antibiotic inactivation
Pseudomonas aeruginosa	AAC(6')-Iae	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
uncultured bacterium BLR18	UBA-18	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	QnrB21	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;amifloxacin	antibiotic inactivation
Phocaeicola vulgatus	CfxA	cephalosporin	cefoxitin;cefmetazole;cefazolin	antibiotic inactivation
Salmonella enterica subspecies A serovar Newport	AAC(3)-IIa	aminoglycoside antibiotic	astromicin;sisomicin;gentamicin	antibiotic inactivation
Escherichia coli	arr-3	rifamycin antibiotic	rifampin;rifaximin;rifabutin	antibiotic inactivation
Escherichia coli	CMY-40	cephalosporin	None	antibiotic inactivation
Mycolicibacterium fortuitum	AAC(2')-Ib	aminoglycoside antibiotic	dibekacin;netilmicin;tobramycin	antibiotic inactivation
Shewanella algae	QnrA4	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;amifloxacin	antibiotic inactivation
Campylobacter jejuni subsp.jejuni	spnBylei 269.97	macrolide antibiotic;fluoroquinolone antibiotic	erythromycin;clarithromycin;ceftazidime;ceftriaxone	antibiotic inactivation
Enterococcus faecalis	SHV-97	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-172	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Enterobacter cloacae	TEM-217	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;ceftriaxone	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-48	cephalosporin	None	antibiotic inactivation
Escherichia coli	KPC-9	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	CMY-80	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-198	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Brucella anthropi	OCH-2	monobactam;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-6	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;ceftriaxone	antibiotic inactivation
Pseudomonas aeruginosa	GES-13	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-55	cephalosporin	ceftazidime;ceftriaxone	antibiotic inactivation
Escherichia coli	FOX-2	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	QnrB7	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;amifloxacin	antibiotic inactivation

Escherichia coli	SHV-102	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter pittii	OXA-207	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella pneumoniae	SHV-43	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-11	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	SHV-57	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CMY-24	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	LEN-6	penicillin beta-lactam	None	antibiotic inactivation
Brucella anthropi	OCH-4	monobactam;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	CMY-113	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	NDM-1	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-25	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-350	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Vibrio cholerae non-O1/non-O139	OACB39	penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	QnrB25	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;erfloxacin	antibiotic inactivation
Brachyspira pilosicoli	OXA-63	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter sp. 631	AAC(6')-Iv	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Klebsiella oxytoca	OXY-2-9	monobactam;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Salmonella enterica subspecies A serovar Typhimurium	dhfr-A28	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Klebsiella oxytoca	SHV-46	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-43	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CMY-32	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-14	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella oxytoca	OXY-1-1	monobactam;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella oxytoca	IMP-34	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-324	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Rhodococcus hoagii	iri	rifamycin antibiotic	rifampin;rifaximin;rifabutin	antibiotic inactivation
Escherichia coli	TEM-55	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;cefepime	antibiotic inactivation

Campylobacter jejuni subsp. jejuni	spnE	macrolide antibiotic;fluoroquinolone antibiotic	erythromycin;clarithromycin;levofloxacin;ciprofloxacin	antibiotic target replacement
Providencia sp. 4440	CTX-M-31	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-87	cephalosporin	None	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	isfA	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target protection
Shewanella algae	QnrA3	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target protection
Aeromonas allosaccharophila	acpA4	carbapenem	None	antibiotic inactivation
Clostridium perfringens	tetB(P)	tetracycline antibiotic	tetracycline;doxycycline;minocycline	antibiotic target protection
Klebsiella pneumoniae	SHV-150	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-1	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-171	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Enterococcus faecium	InuB	lincosamide antibiotic	lincomycin;clindamycin	antibiotic inactivation
Staphylococcus aureus subsp. aureus LGA251	ubpC	penicillin beta-lactam	methicillin	antibiotic target replacement
Pseudomonas aeruginosa PAO1	acpA	peptide antibiotic	polymyxin B	antibiotic target alteration
Pseudomonas aeruginosa MexC	MexC	macrolide antibiotic;fluoroquinolone antibiotic	erythromycin;clarithromycin;levofloxacin;ciprofloxacin	antibiotic target alteration
Pseudomonas aeruginosa OprJ	OprJ	macrolide antibiotic;fluoroquinolone antibiotic	erythromycin;clarithromycin;levofloxacin;ciprofloxacin	antibiotic target alteration
Enterobacter kobei	TEM-26	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Klebsiella aerogenes	CMY-10	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-216	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Proteus mirabilis	TEM-113	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Enterococcus faecium	vanR gene in vanA cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Serratia marcescens	SMB-1	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia meningoseptica	qorB	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa OXA-3	OXA-3	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Escherichia coli	CTX-M-158	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-141	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella sp. ARS06-441	CTX-M-68	cephalosporin	None	antibiotic inactivation
Escherichia coli str. K-12 substr. MG1655	subS	aminocoumarin antibiotic	novobiocin	antibiotic efflux

Salmonella enterica subspecies I serovar Bovismorbificans	QnrD4	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and rifampicin	antibiotic target alteration
Enterococcus faecium	vanD	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Klebsiella pneumoniae	SHV-20	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Rhodococcus hoagii	vanH gene in vanO cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
uncultured bacterium	tet(37)	tetracycline antibiotic	tetracycline	antibiotic inactivation
Bacteroides fragilis	tet(X)	glycylcycline;tetracycline	tigecycline;tetracycline;doxycycline	antibiotic inactivation;ch
Raoultella terrigena	QnrB55	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and rifampicin	antibiotic target alteration
Escherichia coli	TEM-83	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Morganella morganii	DHA-17	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-157	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-13	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-161	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Parabacteroides distasonis	ISfxA5	cephalosporin	None	antibiotic inactivation
Escherichia coli	FosA3	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Plasmid RP4	APH(3')-Ib	aminoglycoside antibiotic	neomycin;ribostamycin;kanamycin	antibiotic target alteration
Klebsiella pneumoniae	TEM-68	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Enterococcus faecium	vatH	streptogramin antibiotic;streptogramin A	streptogramin A;Mithracin	antibiotic inactivation;da
Escherichia coli	CTX-M-102	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-44	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-20	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-14	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	QnrB14	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and rifampicin	antibiotic target alteration
Citrobacter freundii	CMY-117	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-163	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Proteus mirabilis	DHA-12	cephalosporin	None	antibiotic inactivation
Shigella sp. SH223	CTX-M-108	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	OKP-A-2	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation

Acinetobacter nosocomialis	OXA-138	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-26	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Citrobacter freundii	QnrB62	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;moxifloxacin;gatifloxacin	antibiotic target protection
Acinetobacter baumannii	OXA-160	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Escherichia coli	CMY-58	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-142	monobactam;cephalosporin	cefepime;cefazidime;meropenem	antibiotic inactivation
Staphylococcus aureus subsp. aureus Mu50	hspA	glycylcycline;tetracycline	tigecycline	antibiotic efflux
Legionella longbeachae	tet(56)	tetracycline antibiotic	tetracycline;oxytetracycline	antibiotic inactivation
Chryseobacterium indologenes	ND-4	carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	TEM-42	monobactam;cephalosporin	cefepime;cefazidime;meropenem	antibiotic inactivation
Acinetobacter haemolyticus	OXA-215	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Pseudomonas aeruginosa	AMP-16	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	PER-7	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CMY-61	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	OXA-244	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	adeB	glycylcycline;tetracycline	tigecycline;tetracycline	antibiotic efflux
Acinetobacter baumannii	OXA-175	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Salmonella enterica subsp. enterica serovar Enteritidis	D14A1	cephalosporin	None	antibiotic inactivation
Escherichia coli str. K-12 str. W3110	GUS	macrolide antibiotic;fluoroquinolone antibiotic;penicillin beta-lactam	erythromycin;clarithromycin;clindamycin	antibiotic efflux
Staphylococcus cohnii	vatC	streptogramin antibiotic;streptogramin A	vancomycin;oritavomycin;dalbavancin	antibiotic inactivation
Klebsiella pneumoniae subsp. pneumoniae	KPC-19	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Salmonella enterica subsp. enterica serovar Typhimurium	plfA	thiazolidine pyrimidine antibiotic	trimethoprim	antibiotic target replacement
Stenotrophomonas maltophilia	shlA	macrolide antibiotic;fluoroquinolone antibiotic;phenicol	erythromycin;clarithromycin;clindamycin	antibiotic efflux
Klebsiella pneumoniae	SHV-124	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-142	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-185	monobactam;cephalosporin	cefepime;cefazidime;meropenem	antibiotic inactivation
Streptomyces glaucescens	APH(6)-Ib	aminoglycoside antibiotic	streptomycin	antibiotic inactivation

Staphylococcus epidermidis	ErmC	macrolide antibiotic;lincosamides	erythromycin;clindamycin	antibiotic inactivation
uncultured bacterium BLR1	RFA-17	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-99	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-63	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Chryseobacterium indologenes	IMP-40	carbapenem	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-33	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Micrococcus luteus	Erm(36)	macrolide antibiotic;lincosamides	erythromycin;clindamycin	antibiotic inactivation
Citrobacter braakii	CMY-74	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-53	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	QnrB37	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;moxifloxacin	antibiotic inactivation
Escherichia coli	APH(6)-Ic	aminoglycoside antibiotic	streptomycin	antibiotic inactivation
Citrobacter freundii	CMY-90	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-122	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Providencia rettgeri	CTX-M-131	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-383	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	VEB-9	monobactam;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-94	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	LCR-1	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-92	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter coli CVM129	NDP(20)-Ig	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin;gentamicin A;gentamicin	antibiotic inactivation
Escherichia coli	rmtB	aminoglycoside antibiotic	dibekacin;amikacin;gentamicin	antibiotic inactivation
Escherichia coli	CTX-M-93	cephalosporin	None	antibiotic inactivation
Vibrio parahaemolyticus	QAR-31. FDA_R31	penicillin beta-lactam	None	antibiotic inactivation
Mammaliococcus lentus	fexA	phenicol antibiotic	chloramphenicol;florfenicol	antibiotic efflux
Escherichia coli	CTX-M-139	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-5	penicillin beta-lactam	oxacillin	antibiotic inactivation
Escherichia coli	CMY-50	cephalosporin	None	antibiotic inactivation

Klebsiella variicola At-22	LEN-13	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella oxytoca	OXY-6-4	monobactam;cephalosporin	None	antibiotic inactivation
Exiguobacterium sp. S3-2	ANT(6)-Ia	aminoglycoside antibiotic	streptomycin	antibiotic inactivation
Klebsiella pneumoniae	SHV-106	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-36	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	SHV-186	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-49	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Pseudomonas aeruginosa	PER-1	monobactam;carbapenem	None	antibiotic inactivation
Escherichia coli	TEM-152	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Klebsiella pneumoniae	OKP-A-11	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	VIM-25	carbapenem;cephalosporin	None	antibiotic inactivation
Serratia marcescens	AAC(3)-IIb	aminoglycoside antibiotic	dibekacin;sisomicin;netilmicin	antibiotic inactivation
Klebsiella pneumoniae	KPC-15	monobactam;carbapenem	None	antibiotic inactivation
Acinetobacter baumannii	OXA-381	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Streptomyces thermotolerans	transA	macrolide antibiotic	carbomycin	antibiotic target protection
uncultured bacterium	GES-10	carbapenem;cephalosporin	None	antibiotic inactivation
Staphylococcus aureus subsp. aureus N315	subsp. aureus N315	penicillin beta-lactam	methicillin	antibiotic target replacement
Acinetobacter baumannii	OXA-316	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Pseudomonas aeruginosa	GES-8	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	OKP-A-14	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	IMP-8	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-314	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Klebsiella pneumoniae	OKP-A-13	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-242	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Citrobacter braakii	QnrB70	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target protection
Shigella sp. SH284	CTX-M-113	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-125	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation

Klebsiella pneumoniae	GES-1	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-104	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacillus licheniformis	bcrB	peptide antibiotic	bacitracin;bacitracin A;bacitracin B;bacitracin F	antibiotic inactivation
Citrobacter freundii	QnrB48	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin;gatifloxacin	antibiotic inactivation
Acinetobacter baumannii	OXA-100	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Kluyvera ascorbata	CTX-M-77	cephalosporin	None	antibiotic inactivation
Plasmid pNG2	ErmX	macrolide antibiotic;lincosamide antibiotic;streptogramin antibiotic	erythromycin;clindamycin;streptogramin	antibiotic inactivation
Enterobacter cloacae	ACT-15	carbapenem;cephalosporin	None	antibiotic inactivation
Vibrio cholerae	sul2	sulfonamide antibiotic	sulfadiazine;sulfadimidine;sulfadoxine;sulfamethoxazole	antibiotic inactivation
Pseudomonas aeruginosa	APH(3')-IIb	aminoglycoside antibiotic	neomycin;ribostamycin;butirosin;kanamycin	antibiotic inactivation
Acinetobacter baumannii	SHV-96	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	TEM-88	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Acinetobacter bereziniae	OXA-418	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-64	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Shigella sonnei	TEM-137	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Klebsiella pneumoniae	SHV-93	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter bereziniae	OXA-356	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Escherichia coli	CMY-69	cephalosporin	None	antibiotic inactivation
Salmonella enterica subspecies A serovar Bredeney	OXA-429	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter johnsonii	OXA-333	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Streptomyces albulus	AAC(6')-Isa	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Enterobacter kobei	MIR-15	monobactam;cephalosporin	None	antibiotic inactivation
Escherichia coli	VEB-8	monobactam;cephalosporin	None	antibiotic inactivation
Streptomyces rimosus	otr(B)	tetracycline antibiotic	tetracycline	antibiotic efflux
Streptomyces sp. WAC4747	47A	rifamycin antibiotic	rifampin;rifaximin;rifabutin	antibiotic inactivation
uncultured bacterium	tet(40)	tetracycline antibiotic	tetracycline	antibiotic efflux
Aeromonas salmonicida	tet(C)	tetracycline antibiotic	tetracycline	antibiotic efflux

Pseudomonas sp.	tet(G)	tetracycline antibiotic	tetracycline	antibiotic efflux
Escherichia coli str. K-12	sdhS str. MG1655	peptide antibiotic	polymyxin B	antibiotic target alteration
Rhodobacter capsulatus	RCP-1	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-18	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	cmlA4	phenicol antibiotic	chloramphenicol	antibiotic efflux
Salmonella enterica subspecies I serovar Senftenberg	CMN-28	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-378	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Streptomyces lincolnensis	smrC	lincosamide antibiotic	lincomycin;clindamycin;cefasolin	antibiotic target protection
Klebsiella pneumoniae	QnrB1	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;amifloxacin	antibiotic target protection
Salmonella enterica subspecies I serovar Typhimurium	CTX-M-14	cephalosporin	None	antibiotic inactivation
Chryseobacterium gleum	CGB-1	carbapenem;cephalosporin	None	antibiotic inactivation
Enterococcus gallinarum	vanS gene in vanC cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Acinetobacter baumannii	OXA-112	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter lwoffii	OXA-134	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	TEM-96	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Yersinia enterocolitica	y56 beta-lactamase	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter baumannii	OXA-86	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	TEM-153	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Escherichia coli	GES-20	carbapenem;cephalosporin	None	antibiotic inactivation
Staphylococcus aureus	ErmA	macrolide antibiotic;lincosamide antibiotic;streptogramin antibiotic	erythromycin;roxithromycin;clarithromycin	antibiotic target alteration
Salmonella enterica subspecies I serovar Typhimurium	CTX-M-14	cephalosporin	None	antibiotic inactivation
Bacteroides thetaiotaomicron	ErmG	macrolide antibiotic;lincosamide antibiotic;streptogramin antibiotic	erythromycin;roxithromycin;clarithromycin	antibiotic target alteration
Klebsiella pneumoniae	FOX-9	cephalosporin	None	antibiotic inactivation
Escherichia coli	EreA	macrolide antibiotic	erythromycin;roxithromycin;clarithromycin	antibiotic inactivation
Klebsiella pneumoniae	SHV-66	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	AAC(6')-Ib9	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin	antibiotic inactivation
Klebsiella pneumoniae	SHV-77	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation

Enterobacter cloacae subsp. bios	Enterobacter cloacae ATCC 13047	aminoglycoside antibiotic;	neomycin;kanamycin A;tobramycin	antibiotic inactivation
Citrobacter sp. W1065	CMY-77	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	VIM-31	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-134	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	LEN-2	penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	AAC(6')-Ib- Hangzhou	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin	antibiotic inactivation
Acinetobacter baumannii	AAC(6')-Ib4	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-18	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OKP-A-8	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	BEL-1	monobactam;cephalosporin	None	antibiotic inactivation
Chryseobacterium indologenes	IND-1	carbapenem	None	antibiotic inactivation
Klebsiella pneumoniae	TEM-209	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Escherichia coli	TEM-29	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Pseudomonas aeruginosa	KPC-5	monobactam;carbapenem	None	antibiotic inactivation
Enterococcus gallinarum	APH(2'')-IIIa	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin;gentamicin A;gentamicin	antibiotic inactivation
Klebsiella pneumoniae	SHV-25	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli O157:H7 sero	sero Sakai	macrolide antibiotic;fluoroquinolone antibiotic	erythromycin;doxycycline;clindamycin;clarithromycin;telithromycin;rofoxacin;levofloxacin	antibiotic inactivation
Acinetobacter pittii	OXA-255	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Salmonella enterica subsp. Enterica	CTX-M-66 serovar Agona	cephalosporin	None	antibiotic inactivation
Stenotrophomonas maltophilia	APH(3')-IIc	aminoglycoside antibiotic	neomycin;ribostamycin;bambamycin	antibiotic inactivation
Pseudomonas aeruginosa	IMP-21	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-241	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-54	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-28	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Pseudomonas aeruginosa	IMP-14	carbapenem;cephalosporin	None	antibiotic inactivation
Streptomyces kanamyceticus	AAC(6')-Ib-SK	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin	antibiotic inactivation
Klebsiella pneumoniae	TEM-136	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation

Klebsiella pneumoniae	SHV-74	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-1	cephalosporin;penicillin beta-lactam	clavulanic acid	antibiotic inactivation
Escherichia coli	CMY-102	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	APH(6)-Id	aminoglycoside antibiotic	streptomycin	antibiotic inactivation
Acinetobacter baumannii	OXA-365	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Shewanella algae	QnrA7	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and fluoroquinolones	antibiotic target protection
Pseudomonas aeruginosa	acmIA1	phenicol antibiotic	chloramphenicol	antibiotic efflux
Bordetella bronchiseptica	cmlB1	phenicol antibiotic	chloramphenicol	antibiotic efflux
Klebsiella oxytoca	dfrB3	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Acinetobacter baumannii	OXA-95	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Klebsiella pneumoniae	SHV-76	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-22	cephalosporin	None	antibiotic inactivation
Enterococcus faecium	vgaD	streptogramin antibiotic;streptogramin A antibiotic;	teicoplanin	antibiotic target protection
Streptococcus pyogenes	catS	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic inactivation
Citrobacter braakii	QnrB33	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and fluoroquinolones	antibiotic target protection
Klebsiella pneumoniae	MOX-1	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella variicola	LEN-12	penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-206	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Escherichia coli	SHV-2	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	VIM-19	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Providencia rettgeri	CTX-M-114	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	VIM-27	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Streptomyces netropsis	APH(9)-Ib	aminoglycoside antibiotic	spectinomycin	antibiotic inactivation
Klebsiella pneumoniae	SHV-103	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-10	monobactam;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-71	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	QnrB73	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and fluoroquinolones	antibiotic target protection

Klebsiella pneumoniae	CTX-M-141	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-384	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella oxytoca	TEM-118	monobactam;cephalosporin	cefepime;cefazidime;betapactam	antibiotic inactivation
Acinetobacter baumannii	AAC(6')-Ib3	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin	antibiotic inactivation
Pseudomonas aeruginosa	IMP-35	carbapenem;cephalosporin	None	antibiotic inactivation
Vibrio fluvialis	sul1	sulfonamide antibiotic	sulfadiazine;sulfadimidine;sulfadoxine;sulfaplatin	antibiotic inactivation
Escherichia coli	DHA-22	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-37	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-19	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	LEN-3	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	TEM-20	monobactam;cephalosporin	cefepime;cefazidime;betapactam	antibiotic inactivation
Pseudomonas aeruginosa	IMP-37	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-420	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	VIM-4	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-161	cephalosporin;penicillin beta-lactam	cefepime	antibiotic inactivation
Klebsiella pneumoniae	SHV-158	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-30	carbapenem;cephalosporin	None	antibiotic inactivation
Salmonella enterica subspecies Enterica serovar Typhimurium	CTX-M-7	cephalosporin	None	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-323	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	LEN-5	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-5	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	CMY-41	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-253	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Proteus mirabilis	CMY-14	cephalosporin	None	antibiotic inactivation
Salmonella enterica subspecies Enterica serovar Infantis	TEM-69	monobactam;cephalosporin	cefepime;cefazidime;betapactam	antibiotic inactivation
Serratia marcescens	IMP-6	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas putida	AAC(6')-31	aminoglycoside antibiotic	neomycin;amikacin;sisomicin;netilmicin;kanamycin	antibiotic inactivation

Vibrio parahaemolyticus	CARB-17	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-59	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-79	monobactam;cephalosporin;penicillin beta-lactam	cefepime;cefazidime;aztreonam	antibiotic inactivation
Mycobacterium smegmatis	Eris(38)	macrolide antibiotic;lincosamide antibiotic	erythromycin;clarithromycin;telithromycin	antibiotic target alteration
Enterococcus faecium	vanB	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Klebsiella pneumoniae	OXA-48	carbapenem;penicillin beta-lactam	meropenem;tazobactam;meropenem	antibiotic inactivation
Klebsiella pneumoniae	OXA-245	carbapenem;penicillin beta-lactam	meropenem;tazobactam	antibiotic inactivation
Escherichia coli	CTX-M-21	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	QnrB29	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target protection
Escherichia coli	CMY-17	cephalosporin	None	antibiotic inactivation
Escherichia coli str. K-12	acbB str. MG1655	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Enterobacter cloacae	AAC(3)-VIa	aminoglycoside antibiotic	sisomicin;6'-N-ethylnetilmicin	antibiotic inactivation
Escherichia coli	NDM-5	carbapenem;cephalosporin	meropenem;tazobactam	antibiotic inactivation
Pseudomonas aeruginosa	PDC-2	monobactam;carbapenem	meropenem;tazobactam	antibiotic inactivation
Klebsiella pneumoniae	LEN-19	penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter haemolyticus	AAC(6')-Ig	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Acinetobacter baumannii	OXA-58	carbapenem;penicillin beta-lactam	meropenem;tazobactam	antibiotic inactivation
Campylobacter fetus subsp. F	APH(6)-Ib	aminoglycoside antibiotic	streptomycin	antibiotic inactivation
Enterobacter cloacae	ACT-17	carbapenem;cephalosporin	meropenem;tazobactam	antibiotic inactivation
Acinetobacter baumannii	OXA-435	carbapenem;penicillin beta-lactam	meropenem;tazobactam	antibiotic inactivation
Pseudomonas aeruginosa	rarr-2	rifamycin antibiotic	rifampin;rifaximin;rifabutin	antibiotic inactivation
Bacillus anthracis	ErmD	macrolide antibiotic;lincosamide antibiotic	erythromycin;clarithromycin;telithromycin	antibiotic target alteration
Salmonella enterica subsp. Enterica serovar Typhimurium	OXA-42	cephalosporin;penicillin beta-lactam	cefepime;cefazidime;amoxicillin	antibiotic inactivation
Enterobacter cloacae	IMI-7	carbapenem	None	antibiotic inactivation
Acinetobacter baumannii	APH(3')-VIa	aminoglycoside antibiotic	neomycin;amikacin;ribostamycin	antibiotic inactivation
Acinetobacter baumannii	OXA-180	carbapenem;penicillin beta-lactam	meropenem;tazobactam	antibiotic inactivation
Escherichia coli	FOX-8	cephalosporin	None	antibiotic inactivation

Escherichia coli	TEM-186	monobactam;cephalosporin;penicillin	ceftazidime;betapactam	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-11	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Campylobacter jejuni	OXA-184	penicillin beta-lactam	oxacillin	antibiotic inactivation
Shigella sonnei	CTX-M-64	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-23	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella pneumoniae	CMY-19	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-9	monobactam;carbapenem;cephalosporin	ceftazidime	antibiotic inactivation
Pseudomonas aeruginosa	AAC(3)-Ic	aminoglycoside antibiotic	astromicin;sisomicin;gentamicin	antibiotic inactivation
Pasteurella multocida	tet(H)	tetracycline antibiotic	tetracycline	antibiotic efflux
Acinetobacter sp. LUH5605	tet(39)	tetracycline antibiotic	tetracycline	antibiotic efflux
Pseudomonas aeruginosa	MD1	fluoroquinolone antibiotic;diaminopyrimidine antibiotic	diaminopyrimidine antibiotic	antibiotic efflux
Pseudomonas aeruginosa	MD5	fluoroquinolone antibiotic;diaminopyrimidine antibiotic	diaminopyrimidine antibiotic	antibiotic efflux
Proteus mirabilis	tet(J)	tetracycline antibiotic	tetracycline	antibiotic efflux
Mycobacterium smegmatis	tet(MC2 155)	tetracycline antibiotic	tetracycline	antibiotic efflux
Enterococcus faecium	AAC(6')-II	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Acinetobacter baumannii	OXA-88	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella pneumoniae	SHV-109	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Enterobacter cloacae	MIR-6	monobactam;cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-90	monobactam;cephalosporin;penicillin	ceftazidime;betapactam	antibiotic inactivation
Klebsiella pneumoniae	dfrA12	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Citrobacter freundii	CMY-86	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-169	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	dfrA17	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Escherichia coli	OXA-7	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Enterococcus faecium	vanR gene in vanD cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Enterococcus faecium	vanZ gene in vanA cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Streptomyces ambofaciens	ErmO-srmA	macrolide antibiotic;lincosamide	clarithromycin;spiramycin;erythromycin	antibiotic target alteration

Caulobacter vibrioides	CAU-1	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Empedobacter brevis	EBR-1	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-124	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	TEM-156	monobactam;cephalosporin;cefepime;cefazidime;beta-lactam	None	antibiotic inactivation
Citrobacter freundii	CMY-63	cephalosporin	None	antibiotic inactivation
Acinetobacter lwoffii	OXA-363	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Aeromonas hydrophila	AER-1	penicillin beta-lactam	None	antibiotic inactivation
Vibrio fluvialis	QnrVC5	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and rifaximin	antibiotic target protection
Pseudomonas aeruginosa	OXA-240	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-39	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-3	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-146	monobactam;cephalosporin;cefepime;cefazidime;beta-lactam	None	antibiotic inactivation
Streptomyces venezuelae	Erm(31)	macrolide antibiotic;lincosamide;glycopeptide antibiotic	erythromycin;clindamycin;vancomycin	antibiotic target alteration
Enterococcus faecalis	vanG	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Klebsiella pneumoniae	SHV-22	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella oxytoca	TEM-129	monobactam;cephalosporin;cefepime;cefazidime;beta-lactam	None	antibiotic inactivation
Citrobacter werkmanii	QnrB34	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and rifaximin	antibiotic target protection
Mammaliicoccus sciuri	IsaB	lincosamide antibiotic;streptogramin antibiotic	clindamycin;erythromycin	antibiotic target protection
Pseudomonas aeruginosa	aadA15	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Escherichia coli	CMY-94	cephalosporin	None	antibiotic inactivation
Enterobacter asburiae	MIR-9	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	OKP-A-4	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Listeria monocytogenes	norB	fluoroquinolone antibiotic	ciprofloxacin;moxifloxacin;and flumequinolone	antibiotic target alteration
Klebsiella pneumoniae subsp. pneumoniae	NDM-9	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter schindleri	OXA-360	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CMY-46	cephalosporin	None	antibiotic inactivation
Acinetobacter nosocomialis	OXA-194	carbapenem;penicillin beta-lactam	None	antibiotic inactivation

Escherichia coli	TEM-54	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Citrobacter werkmanii	QnrB22	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin;gatifloxacin	antibiotic inactivation
Klebsiella pneumoniae	KPC-12	monobactam;carbapenem	None	antibiotic inactivation
Citrobacter freundii	CMY-81	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	IMP-4	carbapenem;cephalosporin	None	antibiotic inactivation
Salmonella enterica subsp. enterica serovar Typhimurium	monobactam;T2	carbapenem;cephalosporin	penicillin	antibiotic inactivation
Campylobacter jejuni subsp. jejuni	smcAylei 269.97	macrolide antibiotic;fluoroquinolone antibiotic	erythromycin;clindamycin;ceftriaxone;cefepime;fosfomicin;telavancin	antibiotic inactivation
Escherichia coli	CTX-M-105	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-182	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-176	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-327	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-248	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Streptomyces viridochromogenus	EryA	macrolide antibiotic;lincosamide antibiotic	erythromycin;clindamycin	antibiotic inactivation
Staphylococcus aureus	vatB	streptogramin antibiotic;streptogramin A	vancomycin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-354	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Escherichia coli str. K-12	subsp. MG1655	fluoroquinolone antibiotic;lincosamide antibiotic	ciprofloxacin;levofloxacin;erythromycin;clindamycin	antibiotic inactivation
Acinetobacter baumannii	ATEB-1	monobactam;cephalosporin	None	antibiotic inactivation
Streptomyces thermotolerans	EryH	macrolide antibiotic;lincosamide antibiotic	erythromycin;clindamycin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-16	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	SHV-55	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-71	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Klebsiella pneumoniae	SHV-168	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Staphylococcus epidermidis	disA	macrolide antibiotic;streptogramin antibiotic	erythromycin;clindamycin	antibiotic inactivation
Vibrio parahaemolyticus	CMR-220633	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-28	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	VIM-39	carbapenem;cephalosporin	None	antibiotic inactivation
Morganella morganii	DHA-13	cephalosporin	None	antibiotic inactivation

Klebsiella pneumoniae	SHV-173	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	QnrB45	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and ofloxacin	antibiotic target protection
Streptomyces niveus	novA	aminocoumarin antibiotic	novobiocin	antibiotic efflux
Pseudomonas aeruginosa	VIM-1	carbapenem;cephalosporin	None	penicillin beta-lactam
Pseudomonas aeruginosa	OXA-141	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Mycolicibacterium mageritense(40)		macrolide antibiotic;lincosamide antibiotic	erythromycin;clarithromycin	antibiotic target alteration
Citrobacter koseri	TEM-134	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Pseudomonas syringae	FosC	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Klebsiella pneumoniae	SHV-119	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-139	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-219	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Brucella anthropi	OCH-5	monobactam;cephalosporin	None	penicillin beta-lactam
Acinetobacter baumannii	OXA-231	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Streptomyces venezuelae	Erm(30)	macrolide antibiotic;lincosamide antibiotic	erythromycin;streptomycin	antibiotic target alteration
Serratia marcescens	TEM-178	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Acinetobacter baumannii	AAC	fluoroquinolone antibiotic;tetracycline antibiotic		antibiotic efflux
Klebsiella pneumoniae	aadA2	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Escherichia coli	CMY-30	cephalosporin	None	antibiotic inactivation
Salmonella enterica subspecies Enterica serovar Typhimurium	CTX-M-15	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-33	cephalosporin	None	antibiotic inactivation
Streptococcus pyogenes	mel	macrolide antibiotic;streptogramin antibiotic	erythromycin;clithromycin	antibiotic target protection
Campylobacter jejuni subspecies jejuni NCTC 11168 = ATCC 700619		macrolide antibiotic;fluoroquinolone antibiotic	erythromycin;ofloxacin	antibiotic target protection
Enterobacter asburiae	MIR-13	monobactam;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	AAC(6'')-Ib'	aminoglycoside antibiotic	amikacin;tobramycin	antibiotic inactivation
Escherichia coli	CMY-53	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-397	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-81	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation

Salmonella enterica subsp. Enteritidis	TEM-14a	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Pseudomonas aeruginosa	aadA6/aadA10	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Escherichia coli	mphA	macrolide antibiotic	erythromycin;roxithromycin;clarithromycin;clarithromycin	antibiotic inactivation
Klebsiella oxytoca	OXY-5-1	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella aerogenes	TEM-114	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Mycobacterium tuberculosis	AB(2)Rlc	aminoglycoside antibiotic	dibekacin;netilmicin;tobramycin;N-hydroxyphenylglycidyl amikacin	antibiotic inactivation
Citrobacter freundii	CMY-72	cephalosporin	None	antibiotic inactivation
Escherichia coli O157:H7	HN-Sakai	macrolide antibiotic;fluoroquinolone antibiotic	erythromycin;clarithromycin;clarithromycin;beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	FOX-5	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-96	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-157	cephalosporin	None	antibiotic inactivation
Burkholderia cepacia	ceoB	fluoroquinolone antibiotic;aminoglycoside antibiotic	None	antibiotic efflux
Pseudomonas aeruginosa	GES-23	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-46	cephalosporin	None	antibiotic inactivation
uncultured bacterium	OXA-119	penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacillus subtilis	bmr	fluoroquinolone antibiotic;acetic acid;antibiotic	acetic acid;antibiotic	antibiotic efflux;disinfecting
Citrobacter braakii	QnrB68	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic efflux
Shewanella algae	OXA-55	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	SHV-31	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Niallia circulans	APH(3')-IVa	aminoglycoside antibiotic	neomycin;ribostamycin;bambamycin	antibiotic inactivation
Yersinia enterocolitica (type O:8)	pesA	peptide antibiotic	polymyxin B;polymyxin B1	antibiotic efflux
Klebsiella pneumoniae	SHV-149	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	QnrB56	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic efflux
Stenotrophomonas maltophilia	shlA	aminoglycoside antibiotic;cephalosporin;penicillin beta-lactam	None	antibiotic efflux
Escherichia coli	MIR-4	monobactam;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	ANT(4')-IIa	aminoglycoside antibiotic	amikacin;tobramycin;isepamicin	antibiotic inactivation
Citrobacter braakii	QnrB40	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic efflux

Citrobacter freundii	CMY-115	cephalosporin	None	antibiotic inactivation
Brachyspira pilosicoli	OXA-192	penicillin beta-lactam	oxacillin	antibiotic inactivation
Escherichia coli	QnrS3	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and ofloxacin	antibiotic inactivation
Acinetobacter sp. 640	AAC(6')-Iw	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Escherichia coli	CTX-M-67	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VIM-10	carbapenem;cephalosporin	None	antibiotic inactivation
Plasmid pGT633	ErmT	macrolide antibiotic;lincosamides	erythromycin;clindamycin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-210	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Serratia marcescens	GES-16	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-45	monobactam;cephalosporin	ceftazidime;ceftiofur	antibiotic inactivation
Klebsiella pneumoniae	TEM-104	monobactam;cephalosporin	ceftazidime;ceftiofur	antibiotic inactivation
Citrobacter werkmanii	QnrB12	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and ofloxacin	antibiotic inactivation
Acinetobacter baumannii	OXA-110	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-6	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Chryseobacterium indologenes	ND-45	carbapenem	None	antibiotic inactivation
Escherichia coli	SHV-34	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Shigella sp. SH165	CTX-M-110	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-82	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-7	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Enterobacter cloacae	TEM-141	monobactam;cephalosporin	ceftazidime;ceftiofur	antibiotic inactivation
Proteus mirabilis	TEM-177	monobactam;cephalosporin	ceftazidime;ceftiofur	antibiotic inactivation
Shigella sp. SH361	CTX-M-109	cephalosporin	None	antibiotic inactivation
Acinetobacter nosocomialis	OXA-197	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Shigella flexneri Y	tet(D)	tetracycline antibiotic	tetracycline	antibiotic efflux
Haemophilus influenzae	catII	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-12	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-80	cephalosporin	None	antibiotic inactivation

Enterococcus faecalis ATCC 29212	CGA-29212	lincosamide antibiotic; streptogramin	clindamycin; quinolone; streptomycin; rifampin; fusidic acid; fusate	antibiotic inactivation
Serratia marcescens	AAC(6')-Ic	aminoglycoside antibiotic	dibekacin; amikacin; sisomicin; netilmicin; tobramycin	antibiotic inactivation
Riemerella anatipestifer	EreD	macrolide antibiotic	erythromycin	antibiotic inactivation
Pseudomonas aeruginosa BEL-2	BEL-2	monobactam; cephalosporin	None	antibiotic inactivation
Salmonella enterica subspecies C Enterica serovar Albany	C-Enterica	cephalosporin	None	antibiotic inactivation
Chryseobacterium indologenes	ND-5	carbapenem	None	antibiotic inactivation
Campylobacter fetus subspecies (44)s	sp.(44)s	tetracycline antibiotic	tetracycline; doxycycline; minocycline; tigecycline	antibiotic inactivation
Escherichia coli	mef(B)	macrolide antibiotic	erythromycin; azithromycin	antibiotic efflux
Klebsiella aerogenes	QepA1	fluoroquinolone antibiotic	ciprofloxacin; norfloxacin	antibiotic efflux
Streptomyces vinaceus	vph	peptide antibiotic	viomycin	antibiotic inactivation
Acinetobacter bereziniae	SIM-1	carbapenem; cephalosporin	None	antibiotic inactivation
Escherichia coli	SAT-2	nucleoside antibiotic	streptothricin	antibiotic inactivation
Pseudomonas aeruginosa BAO1	BAO1	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Klebsiella oxytoca	OXY-1-6	monobactam; cephalosporin	None	antibiotic inactivation
Enterobacter hormaechei	ACT-20	carbapenem; cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa AMP-10	AMP-10	carbapenem; cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-5-2	monobactam; cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-111	carbapenem; penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	adeA	glycylcycline; tetracycline	tigecycline; tetracycline	antibiotic efflux
Acinetobacter haemolyticus	OXA-214	carbapenem; penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli str. K-12 substr. MG1655	substr. MG1655	aminocoumarin antibiotic	novobiocin	antibiotic efflux
Citrobacter freundii	CTX-M-3	cephalosporin; penicillin beta-lactam	ceftriaxone; ceftazidime; ceftiofur; ceftazidime; ceftiofur; ceftazidime; ceftiofur	antibiotic inactivation
Escherichia coli str. K-12 substr. MG1655	substr. MG1655	macrolide antibiotic; fluoroquinolone antibiotic	erythromycin; doxycycline; tigecycline	antibiotic inactivation
Klebsiella pneumoniae	SHV-147	cephalosporin; penicillin beta-lactam	None	antibiotic inactivation
Staphylococcus aureus	mecA	penicillin beta-lactam	methicillin	antibiotic target replacement
Klebsiella pneumoniae	SHV-65	cephalosporin; penicillin beta-lactam	None	antibiotic inactivation
uncultured bacterium BLR2	BLR2	cephalosporin; penicillin beta-lactam	None	antibiotic inactivation

Bacteroides fragilis	tet(Q)	tetracycline antibiotic	tetracycline;doxycycline;minocycline	antibiotic target protection
Escherichia coli	tet(32)	tetracycline antibiotic	tetracycline;doxycycline;minocycline	antibiotic target protection
Acinetobacter baumannii	OXA-65	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter baumannii	OXA-170	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Klebsiella pneumoniae	AAC(6')-Iq	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Pseudomonas aeruginosa	ANT(4')-IIb	aminoglycoside antibiotic	amikacin;tobramycin;isepamicin	antibiotic inactivation
Escherichia coli str. K-12 substr. MG1655	subR	fluoroquinolone antibiotic	nalidixic acid	antibiotic efflux
Klebsiella pneumoniae	CTX-M-52	cephalosporin	None	antibiotic inactivation
Campylobacter coli CVM 429733	NEP(3)-IIIa	aminoglycoside antibiotic	neomycin;amikacin;ribostamycin	antibiotic inactivation
Escherichia coli	SHV-126	cephalosporin;penicillin beta-lactam	Meropenem	antibiotic inactivation
Citrobacter freundii	QnrB8	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin	antibiotic target protection
Bacillus cereus	BcII	cephalosporin;penicillin beta-lactam	Meropenem	antibiotic inactivation
Neisseria meningitidis MO58C	O58C	macrolide antibiotic	erythromycin;azithromycin	antibiotic efflux
Salmonella enterica subspecies A serovar Agona	OXA-50	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter baumannii	OXA-166	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Klebsiella pneumoniae	SHV-94	cephalosporin;penicillin beta-lactam	Meropenem	antibiotic inactivation
Acinetobacter baumannii	OXA-425	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Chryseobacterium indologenes	OXA-2	carbapenem	None	antibiotic inactivation
Escherichia coli	TEM-93	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Vibrio cholerae	QnrVC1	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin	antibiotic target protection
Pseudomonas aeruginosa	OXA-251	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Escherichia coli	GES-5	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella aerogenes	TEM-149	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
uncultured bacterium	dfrA22	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Escherichia coli	CTX-M-132	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	VIM-24	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	OXA-233	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation

Acinetobacter baumannii	OXA-223	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	AMP-31	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	CARB-1	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CMY-101	cephalosporin	None	antibiotic inactivation
Salmonella enterica subspecies B serovar Agona	AAC(6)-Ib3c	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin;netilmicin;gentamicin	antibiotic inactivation
Corynebacterium striatum	cmx	phenicol antibiotic	chloramphenicol	antibiotic efflux
Streptomyces antibioticus	soleD	macrolide antibiotic	erythromycin;tylosin	antibiotic inactivation
Acinetobacter baumannii	abeM	fluoroquinolone antibiotic	ciprofloxacin;gentamicin;amikacin;erythromycin;clotrimazole	antibiotic efflux
Citrobacter freundii	QnrB69	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;amifloxacin;gatifloxacin	antibiotic target protection
Pseudomonas aeruginosa	AAC(6')-Ib10	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-26	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	ANT(2'')-Ia	aminoglycoside antibiotic	dibekacin;sisomicin;kanamycin;amikacin;gentamicin	antibiotic inactivation
Klebsiella oxytoca	CMY-26	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-11	cephalosporin	None	antibiotic inactivation
Aeromonas caviae	MOX-6	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-60	cephalosporin	None	antibiotic inactivation
Escherichia coli	AAC(3)-IIc	aminoglycoside antibiotic	dibekacin;sisomicin;netilmicin;tobramycin;streptomycin	antibiotic inactivation
Acinetobacter baumannii	OXA-313	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	TEM-193	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;betipacid	antibiotic inactivation
Klebsiella pneumoniae	rmtG	aminoglycoside antibiotic	amikacin;tobramycin;arbekacin;gentamicin;A-gentamicin	antibiotic target protection
Enterobacter cloacae	IMI-4	carbapenem	None	antibiotic inactivation
Acinetobacter baumannii	OXA-382	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Salmonella enterica subspecies B serovar Typhimurium strain DT2	pmoSB	carbapenem;cephalosporin;penicillin beta-lactam	ceftazidime;cefepime;ceftiofur	antibiotic efflux
Staphylococcus aureus	ANT(9)-Ia	aminoglycoside antibiotic	spectinomycin	antibiotic inactivation
Acinetobacter baumannii	OXA-99	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Streptomyces antibioticus	soleB	macrolide antibiotic	oleandomycin	antibiotic target protection
Klebsiella pneumoniae	KPC-22	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation

Staphylococcus aureus subsp. aureus str. Newman	antB	fluoroquinolone antibiotic	disinfecting agent; ampicillin	antibiotic efflux
Escherichia coli	CTX-M-92	cephalosporin	None	antibiotic inactivation
Salmonella enterica subspecies II serovar Typhimurium	aacA22	aminoglycoside antibiotic	spectinomycin; streptomycin	antibiotic inactivation
Acinetobacter bereziniae	OXA-257	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-11	cephalosporin; penicillin beta-lactam	ceftazidime	antibiotic inactivation
Staphylococcus epidermidis ATCC 12228	blaO	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Acinetobacter baumannii	OXA-108	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-315	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Enterobacter cloacae	CTX-M-74	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-390	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-388	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Shigella flexneri	IMP-3	carbapenem; cephalosporin	None; penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	armA	aminoglycoside antibiotic	dibekacin; amikacin; gentamicin; sisomicin; netilmicin	antibiotic target alteration
Acinetobacter baumannii	OXA-121	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	CMY-62	cephalosporin	None	antibiotic inactivation
Morganella morganii	TEM-124	monobactam; cephalosporin	ceftazidime; cefepime	antibiotic inactivation
Escherichia coli	CMY-6	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-19	cephalosporin; penicillin beta-lactam	ceftazidime	antibiotic inactivation
Pandoraea pnomenusa	OXA-62	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella pneumoniae	SHV-167	cephalosporin; penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-172	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Citrobacter freundii	QnrB15	fluoroquinolone antibiotic	ciprofloxacin; levofloxacin; enoxacin	antibiotic target protection
Mycobacterium smegmatis H37Rv	hacA(202)155	aminoglycoside antibiotic	dibekacin; netilmicin; tobramycin; N-hydroxyphenylglycine	antibiotic inactivation
Acinetobacter baumannii	OXA-89	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-131	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	DHA-6	cephalosporin	None	antibiotic inactivation
Delftia acidovorans	OXA-454	cephalosporin; penicillin beta-lactam	ceftazidime	antibiotic inactivation

Escherichia coli	aadA5	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Klebsiella pneumoniae	TEM-85	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Hafnia alvei	ACC-3	monobactam;cephalosporin	ceftazidime beta-lactam	antibiotic inactivation
Haemophilus parainfluenzae	TEM-15	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Klebsiella oxytoca	OXY-2-4	monobactam;cephalosporin	None penicillin beta-lactam	antibiotic inactivation
Mycolicibacterium smegmatis	Rif ^r MC2 155	rifamycin antibiotic	rifampin;rifaximin;rifabutin	rifapentine target protection
Pseudomonas aeruginosa	AMP-7	carbapenem;cephalosporin	None penicillin beta-lactam	antibiotic inactivation
Escherichia coli str. K-12	subStr. W3110	aminoglycoside antibiotic	neomycin;amikacin;kanamycin	Autoclave gentamicin;gentamicin
Aeromonas hydrophila	cphA2	carbapenem	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-60	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-125	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-15	carbapenem;cephalosporin	None penicillin beta-lactam	antibiotic inactivation
Escherichia coli	CMY-18	cephalosporin	None	antibiotic inactivation
Bacteroides coprosuis DSM 16351	SM-1851	macrolide antibiotic;lincosamide antibiotic;streptogramin antibiotic	erythromycin;clindamycin	erythromycin;clindamycin
Pseudomonas aeruginosa	acmIA6	phenicol antibiotic	chloramphenicol	antibiotic efflux
Escherichia coli	TEM-40	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Klebsiella pneumoniae	SHV-19	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-80	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-103	cephalosporin	None	antibiotic inactivation
Escherichia coli str. K-12	subStr. W3110	nucleoside antibiotic;disinfecting agents	neomycin;gentamicin	antiseptics antibiotic efflux
Vibrio cholerae non-O1/non-O137	OACB37	penicillin beta-lactam	None	antibiotic inactivation
Chryseobacterium indologenes	ND-12	carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-6	monobactam;carbapenem	None cephalosporin	antibiotic inactivation
Klebsiella pneumoniae	OKP-A-10	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-26	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Burkholderia pseudomallei	OXA-59	penicillin beta-lactam	oxacillin	antibiotic inactivation
Enterobacter cloacae	MIR-17	monobactam;cephalosporin	None	antibiotic inactivation

Escherichia coli	TEM-216	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Citrobacter freundii	CMY-112	cephalosporin	None	antibiotic inactivation
Chryseobacterium indologenes	NDS-9	carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-15	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-13	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	TEM-157	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Kluyvera georgiana	CTX-M-78	cephalosporin	None	antibiotic inactivation
Enterococcus faecium	FosB3	phosphonic acid antibiotic	dofomycin	antibiotic inactivation
Staphylococcus aureus	tet(K)	tetracycline antibiotic	tetracycline	antibiotic efflux
Klebsiella pneumoniae	SHV-63	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
uncultured bacterium BLR13A-19	SHV-19	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	GES-19	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Vibrio fluvialis	aadA7	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Klebsiella pneumoniae	SHV-13	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	LEN-22	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	SHV-135	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Streptomyces sp. WAC05262	5262	elfamycin antibiotic	factumycin	antibiotic efflux
Proteus vulgaris	QnrB26	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and ofloxacin	antibiotic target protection
Acinetobacter baumannii AB0057	AB0057	macrolide antibiotic;fluoroquinolone antibiotic	tetracycline;clindamycin;lincomycin;clindolide;clindolide;clindolide;clindolide	antibiotic target protection
Enterococcus faecium	vanH gene in vanD cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Bacillus anthracis	Bla1	penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa VPA01	VPA01	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and ofloxacin	antibiotic efflux
Bacteroides fragilis	CcrA	carbapenem	None	antibiotic inactivation
Janthinobacterium lividum THIN-B	THIN-B	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Escherichia coli str. K-12 substr. MG1655	Substr. MG1655	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and ofloxacin	antibiotic efflux
Escherichia coli str. K-12 substr. MG1655	Substr. MG1655	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and ofloxacin	antibiotic efflux
Photobacterium damsela subsp. piscicida cat (pp-1a)	pp-1a	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic inactivation

Pseudomonas aeruginosa	Pseudomonas aeruginosa	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic inactivation
Morganella morganii	DHA-18	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-44	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-99	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	TEM-199	monobactam;cephalosporin	cefepime;ceftriaxone;cefazidime;betapactam	antibiotic inactivation
Acinetobacter baumannii	CARB-10	penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-40	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-1-4	monobactam;cephalosporin	None	antibiotic inactivation
Serratia marcescens	SME-1	carbapenem	None	antibiotic inactivation
Streptomyces griseus	AAC(3)-Xa	aminoglycoside antibiotic	kanamycin A	antibiotic inactivation
Enterobacter cloacae	ACT-27	carbapenem;cephalosporin	None	antibiotic inactivation
Aeromonas caviae	MOX-8	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	CARB-12	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-48	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	TEM-75	monobactam;cephalosporin	cefepime;ceftriaxone;cefazidime;betapactam	antibiotic inactivation
Citrobacter freundii	CMY-37	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-107	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	InuF	lincosamide antibiotic	lincomycin;clindamycin	antibiotic inactivation
Aeromonas sp. HCUZ 24120753	24120753	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Aeromonas allosaccharophila	PER-6	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	LAT-1	cephalosporin	None	antibiotic inactivation
Enterobacter asburiae	ACT-4	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-224	cephalosporin;penicillin beta-lactam	cefazidime	antibiotic inactivation
Klebsiella pneumoniae	dfrA10	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Aeromonas sobria	cphA8	carbapenem	None	antibiotic inactivation
Proteus mirabilis	VEB-6	monobactam;cephalosporin	None	antibiotic inactivation
Streptomyces griseus	APH(6)-Ia	aminoglycoside antibiotic	streptomycin	antibiotic inactivation

Citrobacter freundii	CMY-49	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae subsp. E	bla _{SHV} -6	aminoglycoside antibiotic;	acetylcoumarin;antibiotic	antibiotic inactivation
Enterobacter cloacae ATCC 13047		aminoglycoside antibiotic;	acetylcoumarin;antibiotic	antibiotic inactivation
Riemerella anatipestifer	OXA-209	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	LEN-4	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CMY-108	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-12	carbapenem;cephalosporin	None	antibiotic inactivation
Stenotrophomonas maltophilia	shlA	aminoglycoside antibiotic;	cephalosporin;penicillin beta-lactam	antibiotic inactivation
Shewanella algae	QnrA2	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;	antibiotic inactivation
Acinetobacter baumannii	OXA-423	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Serratia marcescens	SME-3	carbapenem	None	antibiotic inactivation
Citrobacter freundii	QnrB64	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;	antibiotic inactivation
Klebsiella oxytoca	IMP-28	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	NDM-3	carbapenem;cephalosporin	None	antibiotic inactivation
Proteus mirabilis	CMY-45	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-33	penicillin beta-lactam	oxacillin	antibiotic inactivation
Providencia stuartii	EreA2	macrolide antibiotic	erythromycin	antibiotic inactivation
Enterococcus faecium	vatE	streptogramin antibiotic;	streptogramin A;nitroimidazole	antibiotic inactivation
Klebsiella pneumoniae	SHV-85	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella oxytoca	VIM-32	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	IMP-38	carbapenem;cephalosporin	None	antibiotic inactivation
Proteus mirabilis	TEM-160	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Salmonella enterica subsp. A serovar Typhimurium	bla _{TEM} -1	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Klebsiella pneumoniae	SHV-51	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-168	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Klebsiella pneumoniae	TEM-130	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Acinetobacter baumannii	OXA-67	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Escherichia coli	TEM-81	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation

Acinetobacter baumannii	OXA-249	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella pneumoniae	SHV-143	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Providencia rettgeri	PER-5	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	CMY-16	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	OXA-421	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	GES-2	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-104	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Plasmid NR79	aadA3	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Pseudomonas aeruginosa	armtC	aminoglycoside antibiotic	dibekacin;amikacin;gentamicin	antibiotic target alteration
Enterobacter cloacae	ACT-14	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Burkholderia pseudomallei	blaKPS243	macrolide antibiotic;aminoglycoside antibiotic	erythromycin;azithromycin	antibiotic efflux
Escherichia coli	CMY-22	cephalosporin	None	antibiotic inactivation
Enterococcus faecalis	OrfE0074	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Mammaliicoccus lentus	Erm(43)	macrolide antibiotic;lincosamide antibiotic	erythromycin;clarythromycin	antibiotic target replacement
Streptomyces ribosidificus	APH(3')-Vb	aminoglycoside antibiotic	neomycin;ribostamycin;paromomycin	antibiotic inactivation
Enterococcus faecium	ErmB	macrolide antibiotic;lincosamide antibiotic	erythromycin;clarythromycin	antibiotic target replacement
Stenotrophomonas maltophilia	shlA	aminoglycoside antibiotic;cephalosporin;penicillin beta-lactam	None	antibiotic efflux
Acinetobacter baumannii	OXA-78	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Staphylococcus epidermidis	dicA	fluoroquinolone antibiotic;disinfecting agent	gentamicin;azithromycin	antibiotic efflux
Klebsiella pneumoniae	SHV-140	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	VIM-13	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-187	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Neisseria gonorrhoeae	mtrA	macrolide antibiotic	erythromycin;azithromycin	antibiotic efflux
Klebsiella pneumoniae	OKP-B-20	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Streptococcus oralis	aad(6)	aminoglycoside antibiotic	streptomycin	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-63	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	QnrB16	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target protection

Enterobacter cloacae	ACT-18	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Bacillus cereus ATCC 14579	579B	phosphonic acid antibiotic	fosfomycin		antibiotic inactivation
Pseudomonas aeruginosa	OXA-183	cephalosporin;penicillin beta-lactam	ceftazidime		antibiotic inactivation
Pseudomonas aeruginosa	OXA-205	penicillin beta-lactam	oxacillin		antibiotic inactivation
Klebsiella pneumoniae	SHV-110	cephalosporin;penicillin beta-lactam	None		antibiotic inactivation
Acinetobacter baumannii	OXA-91	carbapenem;penicillin beta-lactam	texacillin		antibiotic inactivation
Klebsiella pneumoniae	OXA-17	cephalosporin;penicillin beta-lactam	ceftazidime		antibiotic inactivation
Pseudomonas aeruginosa	AAC(6')-32	aminoglycoside antibiotic	amikacin;tobramycin;gentamicin		antibiotic inactivation
Klebsiella pneumoniae	SHV-123	cephalosporin;penicillin beta-lactam	None		antibiotic inactivation
Citrobacter freundii	QnrB9	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and floxacin	antibiotic target protection	
Plasmid R387	catIII	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic target protection	
Klebsiella pneumoniae	ACT-3	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Salmonella enterica subspecies enterica serovar Enteritidis	dhfrA5	diaminopyrimidine antibiotic	trimethoprim		antibiotic target replacement
Vibrio parahaemolyticus	QnrVC6	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and floxacin	antibiotic target protection	
Citrobacter freundii	CMY-73	cephalosporin	None		antibiotic inactivation
Escherichia coli	CTX-M-32	cephalosporin	None		antibiotic inactivation
Escherichia coli	OXA-10	cephalosporin;penicillin beta-lactam	ceftazidime		antibiotic inactivation
Citrobacter freundii	QnrB50	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and floxacin	antibiotic target protection	
Aeromonas caviae	PER-3	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None		antibiotic inactivation
Citrobacter braakii	QnrB27	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and floxacin	antibiotic target protection	
Escherichia coli	CMY-64	cephalosporin	None		antibiotic inactivation
Escherichia coli	dfrA14	diaminopyrimidine antibiotic	trimethoprim		antibiotic target replacement
Proteus mirabilis	CMY-99	cephalosporin	None		antibiotic inactivation
Macrococcus caseolyticus	mecB	penicillin beta-lactam	methicillin		antibiotic target replacement
Acinetobacter baumannii	OXA-24	monobactam;carbapenem;penicillin beta-lactam	None		antibiotic inactivation
Klebsiella pneumoniae	SHV-2A	cephalosporin;penicillin beta-lactam	None		antibiotic inactivation
Citrobacter freundii	OXA-101	cephalosporin;penicillin beta-lactam	ceftazidime		antibiotic inactivation

Klebsiella pneumoniae	SHV-23	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
uncultured bacterium BLR1	R1RA-1	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	AAC(6')-Iai	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Klebsiella pneumoniae	SHV-86	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Salmonella enterica subspecies Enterica serovar Derby	CTX-M-84	cephalosporin	None	antibiotic inactivation
Aeromonas salmonicida	cphA5	carbapenem	None	antibiotic inactivation
Escherichia coli	CTX-M-16	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	QnrC	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic target alteration
Pseudomonas aeruginosa	OXA-74	cephalosporin;penicillin beta-lactam	ceftazidime;cefepime	antibiotic inactivation
Serratia marcescens	SME-4	carbapenem	None	antibiotic inactivation
Aeromicrobium erythreum	ErmR	macrolide antibiotic;lincosamide antibiotic	erythromycin;clindamycin	antibiotic target alteration
Proteus mirabilis	CMY-38	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	TEM-194	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Escherichia coli	APH(2'')-IIa	aminoglycoside antibiotic	plazomicin	antibiotic inactivation
Kluyvera sp. MRB7	CTX-M-152	cephalosporin	None	antibiotic inactivation
Enterococcus faecalis	vanE	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Acinetobacter lwoffii	OXA-362	carbapenem;penicillin beta-lactam	ceftazidime;cefepime	antibiotic inactivation
Stenotrophomonas maltophilia	bla-beta-lactamase	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-156	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-45	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Campylobacter coli	SAT-4	nucleoside antibiotic	streptothricin	antibiotic inactivation
Pseudomonas aeruginosa	AMP1	fluoroquinolone antibiotic	difloxacin;flumequinone	antibiotic target alteration
Pseudomonas aeruginosa	MexD	macrolide antibiotic;fluoroquinolone antibiotic	erythromycin;clindamycin	antibiotic target alteration
Serratia marcescens	tet(41)	tetracycline antibiotic	tetracycline	antibiotic efflux
Enterobacter cloacae	GIM-2	monobactam;carbapenem	ceftazidime;cefepime	antibiotic inactivation
Lactococcus lactis	ImrD	lincosamide antibiotic	None	antibiotic efflux
Acinetobacter baumannii	OXA-179	carbapenem;penicillin beta-lactam	ceftazidime;cefepime	antibiotic inactivation

Staphylococcus aureus subsp. aureus ST398	vanE aureus ST398	lincosamide antibiotic; streptogramin	clindamycin; rifampin; streptogramin	antibiotic target protection
Kluyvera ascorbata	CTX-M-95	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-154	cephalosporin; penicillin beta-lactam	Meropenem	antibiotic inactivation
Klebsiella pneumoniae	TEM-197	monobactam; cephalosporin	ceftazidime; meropenem	antibiotic inactivation
Pseudomonas aeruginosa	IMP-13	carbapenem; cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-71	cephalosporin	None	antibiotic inactivation
Salmonella enterica subsp. Enterica serovar Westphalia	CTX-M-53	cephalosporin	None	antibiotic inactivation
Clostridium perfringens	catQ	phenicol antibiotic	azidamfenicol; chloramphenicol	antibiotic inactivation
Streptomyces albus	EXO-1	penicillin beta-lactam	None	antibiotic inactivation
Paenibacillus popilliae ATCC 4706	vanX 4706 in vanF cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus gallinarum	vanR gene in vanC cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Myroides odoratimimus	MUS-1	carbapenem; penicillin beta-lactam	meropenem; piperacillin; ticarcillin	antibiotic inactivation
Enterococcus faecium	vanX gene in vanD cluster	glycopeptide antibiotic	vancomycin; teicoplanin	antibiotic target alteration
Pseudomonas aeruginosa	OprA	macrolide antibiotic; fluoroquinolone antibiotic	erythromycin; rifampin; ciprofloxacin; levofloxacin	antibiotic target alteration
Enterococcus faecalis	vanS gene in vanE cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Citrobacter freundii	CMY-78	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	QnrB57	fluoroquinolone antibiotic	ciprofloxacin; levofloxacin	antibiotic target protection
Aeromonas caviae	MOX-7	cephalosporin; penicillin beta-lactam	Meropenem	antibiotic inactivation
Serratia marcescens	CMY-111	cephalosporin	None	antibiotic inactivation
Escherichia coli	SHV-84	cephalosporin; penicillin beta-lactam	Meropenem	antibiotic inactivation
Enterobacter asburiae	MIR-14	monobactam; cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-203	carbapenem; penicillin beta-lactam	meropenem	antibiotic inactivation
Alkalihalobacillus clausii DSM-K16	vanK16	lincosamide antibiotic; streptogramin	clindamycin; rifampin; streptogramin	antibiotic target protection
Pseudomonas aeruginosa PAO1	PAO1	peptide antibiotic	polymyxin B	antibiotic target alteration
Enterobacter cloacae	SHV-70	cephalosporin; penicillin beta-lactam	Meropenem	antibiotic inactivation
Enterobacter cloacae	ACT-23	carbapenem; cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	TEM-139	monobactam; cephalosporin	ceftazidime; meropenem	antibiotic inactivation

Escherichia coli	CTX-M-2	cephalosporin	None	antibiotic inactivation
Morganella morganii	DHA-21	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	CMY-15	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	AAC(6')-If	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin;netilmicin;gentamicin	antibiotic inactivation
Pseudomonas aeruginosa	IMP-20	carbapenem;cephalosporin	None	antibiotic inactivation
Enterococcus faecalis	vanT gene in vanG cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecalis	vanR gene in vanG cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Listeria monocytogenes	tet(S)	tetracycline antibiotic	tetracycline;doxycycline;minocycline	antibiotic target alteration
Citrobacter freundii	AAC(6')-Ip	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin;netilmicin;gentamicin	antibiotic inactivation
Citrobacter freundii	SHV-95	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-117	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Escherichia coli	CTX-M-79	cephalosporin	None	antibiotic inactivation
Salmonella enterica subspecies A serovar Typhi	AAC(6)-Ia	aminoglycoside antibiotic	dibekacin;sisomicin;netilmicin;gentamicin;2-Deoxy-7-ethylnicotinamide	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-4	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Achromobacter ruhlandii	OXA-258	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-375	carbapenem;penicillin beta-lactam	ceftazidim	antibiotic inactivation
Oligella urethralis	CARB-8	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-17	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	ACC-1	monobactam;cephalosporin	ceftazidim;ceftazidone;cefepime	antibiotic inactivation
Acinetobacter baumannii	adeK	macrolide antibiotic;fluorquinolone antibiotic	clarithromycin;clindamycin;clotrimazole;clotrimazole;clotrimazole	antibiotic inactivation
Enterobacter cloacae	ramA	fluoroquinolone antibiotic;tetracycline antibiotic	ciprofloxacin;levofloxacin;gatifloxacin;gemifloxacin;gatifloxacin	antibiotic inactivation
Enterobacter cloacae	TEM-80	monobactam;cephalosporin	ceftazidim;betapactam	antibiotic inactivation
Citrobacter freundii	CMY-68	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	TEM-211	monobactam;cephalosporin	ceftazidim;betapactam	antibiotic inactivation
Proteus mirabilis	QnrA6	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;gatifloxacin;gemifloxacin	antibiotic inactivation
Acinetobacter genomospecies 1	AAC(6)-It	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin;netilmicin;gentamicin	antibiotic inactivation
Salmonella enterica subspecies A serovar Typhimurium	CTX-M-5	cephalosporin	None	antibiotic inactivation

Pseudomonas aeruginosa	GES-18	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Acinetobacter baumannii	OXA-49	carbapenem;penicillin beta-lactam	oxacillin		antibiotic inactivation
Neisseria gonorrhoeae	macA	macrolide antibiotic	erythromycin		antibiotic efflux
Burkholderia pseudomallei	APH(4)-Ib	aminoglycoside antibiotic	hygromycin B		antibiotic inactivation
Salmonella enterica subspecies I serovar Newport	aphA24	aminoglycoside antibiotic	spectinomycin;streptomycin		antibiotic inactivation
Citrobacter braakii	QnrB67	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	multidrug efflux pump	antibiotic inactivation
Klebsiella pneumoniae	LEN-18	penicillin beta-lactam	None		antibiotic inactivation
Klebsiella pneumoniae	SHV-40	cephalosporin;penicillin beta-lactam	None		antibiotic inactivation
Pseudomonas aeruginosa	OXA-34	penicillin beta-lactam	oxacillin		antibiotic inactivation
Salmonella sp. YLD3	CTX-M-90	cephalosporin	None		antibiotic inactivation
Acinetobacter baumannii	OXA-317	carbapenem;penicillin beta-lactam	oxacillin		antibiotic inactivation
Klebsiella pneumoniae	CMY-31	cephalosporin	None		antibiotic inactivation
Escherichia coli	TEM-143	monobactam;cephalosporin	ceftazidime;cefepime		antibiotic inactivation
Acinetobacter calcoaceticus	OXA-353	carbapenem;penicillin beta-lactam	oxacillin		antibiotic inactivation
Morganella morganii	DHA-5	cephalosporin	None		antibiotic inactivation
Salmonella enterica subspecies I serovar Typhimurium	TEM-135	monobactam;cephalosporin	ampicillin	penicillin beta-lactam	antibiotic inactivation
Brucella anthropi	OCH-6	monobactam;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	ACT-28	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Mycolicibacterium fortuitum	Erm(39)	macrolide antibiotic;lincosamide antibiotic	erythromycin;clindamycin	streptogramin antibiotic	antibiotic inactivation
Klebsiella pneumoniae	MIR-1	monobactam;cephalosporin	None		antibiotic inactivation
Acinetobacter soli	FosK	phosphonic acid antibiotic	fosfomycin		antibiotic inactivation
Escherichia coli	CMY-57	cephalosporin	None		antibiotic inactivation
Klebsiella pneumoniae	SHV-111	cephalosporin;penicillin beta-lactam	None		antibiotic inactivation
Pseudomonas aeruginosa	OXA-142	cephalosporin;penicillin beta-lactam	ceftazidime		antibiotic inactivation
Escherichia coli	QnrB4	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	multidrug efflux pump	antibiotic inactivation
Klebsiella pneumoniae	TEM-115	monobactam;cephalosporin	ceftazidime;cefepime		antibiotic inactivation
Aeromonas dhakensis	AQU-1	cephalosporin	None		antibiotic inactivation

Pseudomonas aeruginosa	IMP-41	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Micromonospora griseorubra	EmrA	macrolide antibiotic;lincosamide antibiotic;streptogramin antibiotic	erythromycin;roxithromycin	antibiotic target alteration	antibiotic inactivation
Klebsiella pneumoniae	OXA-73	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation	antibiotic inactivation
Acinetobacter baumannii	OXA-398	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation	antibiotic inactivation
Acinetobacter bereziniae	OXA-230	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation	antibiotic inactivation
Burkholderia cepacia	ceoA	fluoroquinolone antibiotic;aminoglycoside antibiotic	None	antibiotic efflux	antibiotic efflux
Mycolicibacterium fortuitum	tap	tetracycline antibiotic	tetracycline	antibiotic efflux	antibiotic efflux
Escherichia coli	TEM-184	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation	antibiotic inactivation
Pseudomonas aeruginosa	IMP-44	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Escherichia coli	TEM-101	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation	antibiotic inactivation
Escherichia coli	FOX-4	cephalosporin	None	antibiotic inactivation	antibiotic inactivation
Klebsiella pneumoniae	SHV-73	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation	antibiotic inactivation
Burkholderia pseudomallei	OXA-42	penicillin beta-lactam	oxacillin	antibiotic inactivation	antibiotic inactivation
Proteus mirabilis	CTX-M-66	cephalosporin	None	antibiotic inactivation	antibiotic inactivation
Acinetobacter baumannii	OXA-235	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation	antibiotic inactivation
Escherichia coli	mphB	macrolide antibiotic	erythromycin;roxithromycin	antibiotic inactivation	antibiotic inactivation
Klebsiella pneumoniae	SHV-151	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation	antibiotic inactivation
Pseudomonas aeruginosa	OXA-415	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation	antibiotic inactivation
Chryseobacterium indologenes	IMP-4	carbapenem	None	antibiotic inactivation	antibiotic inactivation
Staphylococcus aureus	vatA	streptogramin antibiotic;streptogramin A	vancomycin	antibiotic inactivation	antibiotic inactivation
Acinetobacter baumannii	GES-24	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Plasmid pTB913	ANT(4')-Ia	aminoglycoside antibiotic	dibekacin;amikacin;tobramycin	antibiotic inactivation	antibiotic inactivation
Escherichia coli	CTX-M-45	cephalosporin	None	antibiotic inactivation	antibiotic inactivation
Klebsiella pneumoniae	SHV-16	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation	antibiotic inactivation
Klebsiella pneumoniae	TEM-53	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-359	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation	antibiotic inactivation
Klebsiella pneumoniae	SHV-28	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation	antibiotic inactivation

Acinetobacter baumannii	OXA-338	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Rhodococcus rhodochrous	smrA	phenicol antibiotic	chloramphenicol	antibiotic efflux
Serratia marcescens	IMP-24	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	CMY-103	cephalosporin	None	antibiotic inactivation
Streptococcus agalactiae	IsaC	lincosamide antibiotic;streptogramin;chloramphenicol	erythromycin;clindamycin;chloramphenicol	antibiotic target protection
Pseudomonas aeruginosa	IMP-18	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-254	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Mammaliicoccus sciuri	Erm(33)	macrolide antibiotic;lincosamide antibiotic;streptogramin	erythromycin;clindamycin	antibiotic target alteration
Klebsiella pneumoniae	SHV-148	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Rhodococcus hoagii	vanO	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Escherichia coli	CTX-M-23	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-93	cephalosporin	None	antibiotic inactivation
Escherichia coli str. K-12 substr. W3110	subA	fluoroquinolone antibiotic	nalidixic acid	antibiotic efflux
Acinetobacter calcoaceticus	OXA-326	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Paenibacillus popilliae ATCC 4706	vanA	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Citrobacter freundii	QnrB35	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target protection
Acinetobacter calcoaceticus	OXA-351	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	aadA16	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Acinetobacter baumannii	NDM-2	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-97	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-56	cephalosporin;penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	VIM-14	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	OKP-A-16	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-144	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	CTX-M-115	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-127	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;betipicillin	antibiotic inactivation
Acinetobacter baumannii	TEM-19	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;betipicillin	antibiotic inactivation

Pseudomonas aeruginosa	aadA11	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Escherichia coli	CTX-M-106	cephalosporin	None	antibiotic inactivation
Escherichia coli	QnrS7	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and ofloxacin	antibiotic target alteration
Klebsiella pneumoniae	SHV-159	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-177	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Klebsiella pneumoniae	OKP-A-5	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-12	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-146	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Streptococcus pneumoniae	Streptococcus pneumoniae	cephalosporin;penicillin beta-lactam	benzoxazinomoxycillin	antibiotic target alteration
uncultured bacterium AOT43	Tet(43)	tetracycline antibiotic	tetracycline	antibiotic efflux
Providencia stuartii	AAC(2')-Ia	aminoglycoside antibiotic	dibekacin;netilmicin;tobramycin;Netilmicin	antibiotic inactivation
Klebsiella oxytoca	TEM-12	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-36	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Acinetobacter johnsonii	OXA-334	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Klebsiella pneumoniae	TEM-48	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Pseudomonas aeruginosa	PAO1	macrolide antibiotic;fluoroquinolone antibiotic	erythromycin;amikacin;gentamicin;Ofloxacin;parbamycin	antibiotic target alteration
Klebsiella pneumoniae	VIM-42	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	ACT-6	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Escherichia coli	QnrB44	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and ofloxacin	antibiotic target alteration
Klebsiella pneumoniae	TEM-164	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Citrobacter koseri	DHA-20	cephalosporin	None	antibiotic inactivation
Morganella morganii	DHA-14	cephalosporin	None	antibiotic inactivation
Enterococcus faecalis	vanX gene in vanB cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Bacteroides fragilis	cepA	cephalosporin	None	antibiotic inactivation
Aeromonas veronii bv. sobria	blaA3	carbapenem	None	antibiotic inactivation
Salmonella enterica subspecies I serovar Typhimurium	MDR	fluoroquinolone antibiotic	ciprofloxacin	antibiotic efflux
Enterobacter sp. SL1	DIM-1	carbapenem;cephalosporin	None	antibiotic inactivation

Paenibacillus popilliae ATCC 14706	vanH4706 in vanF cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Stenotrophomonas maltophilia	AWA(6')-Ib-cr1	fluoroquinolone antibiotic	amikacin; ciprofloxacin; kanamycin A	antibiotic target alteration
Bacillus subtilis subsp. subtilis str. 168	trtB	nucleoside antibiotic	tunicamycin	reduced permeability to antibiotics
Pseudomonas aeruginosa	VEB-2	monobactam; cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-119	cephalosporin	None	antibiotic inactivation
Staphylococcus aureus	ErmY	macrolide antibiotic; lincosamide antibiotic	erythromycin; clindamycin	antibiotic target alteration
Enterobacter cloacae	SHV-183	cephalosporin; penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	TEM-147	monobactam; cephalosporin	ceftazidime; betapactam	antibiotic inactivation
Escherichia coli	SHV-120	cephalosporin; penicillin beta-lactam	None	antibiotic inactivation
Salmonella enterica subsp. Enterica serovar Typhimurium	AWC(6')-Ib-11	aminoglycoside antibiotic	amikacin; kanamycin A; tobramycin	antibiotic inactivation
Acinetobacter baumannii	OXA-168	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Vibrio cholerae non-O1/non-O139	dhfrC3	fluoroquinolone antibiotic	ciprofloxacin; levofloxacin	antibiotic target protection
Acinetobacter baumannii	OXA-107	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Salmonella enterica subsp. Enterica serovar Typhimurium	TEM-141	monobactam; cephalosporin	ceftazidime; betapactam	antibiotic inactivation
Pseudomonas aeruginosa	OXA-14	cephalosporin; penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter baumannii	OXA-70	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Salmonella enterica subsp. Enterica serovar Berta	dhfrB5	fluoroquinolone antibiotic	ciprofloxacin; levofloxacin	antibiotic target protection
Pseudomonas aeruginosa	IM-15	carbapenem; cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	CARB-2	penicillin beta-lactam	None	antibiotic inactivation
Aeromonas caviae	MOX-4	cephalosporin; penicillin beta-lactam	None	antibiotic inactivation
Rhodococcus hoagii	vanX gene in vanO cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecium	vanY gene in vanM cluster	glycopeptide antibiotic	vancomycin; teicoplanin	antibiotic target alteration
Erysipelothrix rhusiopathiae	aet(M)	tetracycline antibiotic	tetracycline; doxycycline	antibiotic target protection
Bacteroides coprosuis DSM 3611	SM(36)	tetracycline antibiotic	tetracycline; doxycycline	antibiotic target protection
Escherichia coli	CTX-M-134	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	TEM-8	monobactam; cephalosporin	ceftazidime; betapactam	antibiotic inactivation
Staphylococcus aureus	vgaB	streptogramin antibiotic; streptogramin A	streptogramin A; dalacin	antibiotic target protection

Pseudomonas aeruginosa	GES-26	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	TEM-3	monobactam;cephalosporin	cefepime;cefazidime;ceftriaxone	antibiotic inactivation
Escherichia coli str. K-12	salA str. MG1655	peptide antibiotic	bacitracin;bacitracin A,bacitracin B;baricitracin	antibiotic inactivation
Acinetobacter colistiniresistans	AAC(6')-Ib	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Klebsiella oxytoca	OXY-1-3	monobactam;cephalosporin	None	antibiotic inactivation
Streptomyces antibioticus	solel	macrolide antibiotic	oleandomycin	antibiotic inactivation
Escherichia coli	CTX-M-27	carbapenem;cephalosporin	ceftazidime;ceftriaxone;ceftiofur	antibiotic inactivation
Bacillus subtilis subsp. spizizenii	phlK str. 168	aminoglycoside antibiotic	streptomycin;gentamicin;neomycin	antibiotic inactivation
Klebsiella pneumoniae	SHV-5	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	GES-6	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CMY-87	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	APH(3'')-Ib	aminoglycoside antibiotic	streptomycin	antibiotic inactivation
Enterococcus hirae	AAC(6')-IId	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Salmonella enterica subsp. enterica serovar Anatum	QnrS2	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic inactivation
Acinetobacter baumannii	OXA-374	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-94	monobactam;cephalosporin	cefepime;cefazidime;ceftriaxone	antibiotic inactivation
Acinetobacter baumannii	OXA-201	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-59	cephalosporin	None	antibiotic inactivation
Escherichia coli	ACT-5	carbapenem;cephalosporin	None	antibiotic inactivation
Pasteurella multocida	aadA14	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Escherichia coli	CMY-59	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-76	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Enterobacter cloacae	IMI-3	carbapenem	None	antibiotic inactivation
Klebsiella pneumoniae	rmtD	aminoglycoside antibiotic	amikacin;tobramycin;arabamycin	antibiotic inactivation
Acinetobacter baumannii	OXA-128	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-312	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	CTX-M-91	cephalosporin	None	antibiotic inactivation

Escherichia coli str. K-12	subSr. MG1655	fluoroquinolone antibiotic	nalidixic acid	antibiotic efflux
Providencia stuartii	CTX-M-75	cephalosporin	None	antibiotic inactivation
Streptomyces wedmorensis	FormB	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Enterobacter cloacae	KPC-13	monobactam;carbapenem	Nonecephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	rmtF	aminoglycoside antibiotic	astromicin;kanamycin A;gentamicin	antibiotic inactivation
Acinetobacter baumannii	OXA-40	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	armtA	aminoglycoside antibiotic	dibekacin;amikacin;gentamicin	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-72	cephalosporin	None	antibiotic inactivation
Escherichia coli	QnrB20	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic inactivation
Pseudomonas aeruginosa	AIM-9	carbapenem;cephalosporin	Nonepenicillin beta-lactam	antibiotic inactivation
Acinetobacter baumannii	OXA-387	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Vibrio cholerae	QnrVC7	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic inactivation
Acinetobacter baumannii	OXA-165	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella pneumoniae	LEN-15	penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-109	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	AIM-3	carbapenem;cephalosporin	Nonepenicillin beta-lactam	antibiotic inactivation
Citrobacter freundii	CMY-67	cephalosporin	None	antibiotic inactivation
Hafnia alvei	ACC-5	monobactam;cephalosporin	ceftazidime;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-7	monobactam;carbapenem	Nonecephalosporin;penicillin	antibiotic inactivation
Proteus mirabilis	CTX-M-116	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-82	monobactam;cephalosporin	ceftazidime;penicillin	antibiotic inactivation
Klebsiella oxytoca	OXY-2-6	monobactam;cephalosporin	Nonepenicillin beta-lactam	antibiotic inactivation
Acinetobacter baumannii	OXA-66	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-389	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Salmonella enterica subsp. enterica serovar Stanley	line	lincosamide antibiotic	lincomycin	antibiotic inactivation
Acinetobacter nosocomialis	OXA-196	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Enterobacter cloacae	MIR-11	monobactam;cephalosporin	None	antibiotic inactivation

Klebsiella variicola	LEN-7	penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	CMY-12	cephalosporin	None	antibiotic inactivation
Serratia marcescens	SRT-2	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	AAC(3)-IIIa	aminoglycoside antibiotic	neomycin;dibekacin;sisomicin;kanamycin;A-tobramycin	antibiotic inactivation
Acinetobacter baumannii	adeN	macrolide antibiotic;fluoroglycylglycylamides	erythromycin;clarithromycin;lincomycin;clindamycin;ceftazidime;cefepime	antibiotic inactivation
Acinetobacter baumannii	OXA-72	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-80	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Morganella morganii	DHA-10	cephalosporin	None	antibiotic inactivation
Shigella sp. SH202	CTX-M-111	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	LEN-24	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-70	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Enterobacter asburiae	MIR-10	monobactam;cephalosporin	None	antibiotic inactivation
Escherichia coli	NDM-4	carbapenem;cephalosporin;penicillin beta-lactam	ticarcillin	antibiotic inactivation
Klebsiella pneumoniae	TEM-86	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Enterococcus durans	AAC(6')-Iih	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin;netilmicin;vancomycin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114a	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	SHV-127	cephalosporin;penicillin beta-lactam	Meropenem	antibiotic inactivation
Capnocytophaga ochracea	CfxA3	cephalosporin	None	antibiotic inactivation
Escherichia coli	NDM-12	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-379	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Enterobacter asburiae	ACT-13	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-51	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-246	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Escherichia coli str. K-12	substr. W3110	macrolide antibiotic;fluoroglycylglycylamides	erythromycin;clarithromycin;lincomycin;clindamycin;ceftazidime;cefepime	antibiotic inactivation
Enterobacter cloacae	ACT-32	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Enterobacter hormaechei	ACT-21	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-17	cephalosporin	None	antibiotic inactivation

Klebsiella pneumoniae	OKP-A-6	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Stenotrophomonas maltophilia	AWC(6')-Iak	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Proteus mirabilis	CTX-M-136	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	AAC(6')-Iad	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
uncultured bacterium BLR13A	BLR13A-13	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Staphylococcus aureus	dfrK	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Pseudomonas aeruginosa	BEL-3	monobactam;cephalosporin	None	penicillin beta-lactam
Citrobacter freundii	CMY-47	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-208	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Staphylococcus aureus	spd	aminoglycoside antibiotic	spectinomycin	antibiotic inactivation
Klebsiella pneumoniae	SHV-27	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	EreB	macrolide antibiotic	erythromycin;roxithromycin	antibiotic inactivation
Escherichia coli str. K-12 substr. W3110	substr. W3110	fluoroquinolone antibiotic;tigecycline;tetracycline;chloramphenicol;trimethoprim	erythromycin;azithromycin	antibiotic inactivation
Streptomyces griseus	APH(3'')-Ia	aminoglycoside antibiotic	streptomycin	antibiotic inactivation
Enterococcus faecium	vanM	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Citrobacter freundii	CMY-34	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-29	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-50	cephalosporin;penicillin beta-lactam	ceftazidime;cefepime;ceftiofur;amoxicillin;ceftazidime	antibiotic inactivation
Enterobacter cloacae	ACT-24	carbapenem;cephalosporin	None	penicillin beta-lactam
Escherichia coli	CTX-M-29	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-150	monobactam;cephalosporin	ceftazidime;cefepime	antibiotic inactivation
Klebsiella pneumoniae	IMP-32	carbapenem;cephalosporin	None	penicillin beta-lactam
Klebsiella pneumoniae	SHV-160	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Streptococcus uberis	InuD	lincosamide antibiotic	lincomycin;clindamycin	antibiotic inactivation
Acinetobacter baumannii	CTX-M-43	cephalosporin	None	antibiotic inactivation
Burkholderia cepacia	OXA-118	penicillin beta-lactam	oxacillin	antibiotic inactivation
Neisseria meningitidis MO58D	MO58D	macrolide antibiotic	erythromycin;azithromycin	antibiotic efflux

Acinetobacter sp. BM2722	2AAC(6')-Ix	aminoglycoside antibiotic	dibekacin;amikacin;sisonnide;netilmicin;gentamicin	antibiotic inactivation
Citrobacter braakii	QnrB30	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin;gatifloxacin	antibiotic inactivation
Pseudomonas aeruginosa	MexB	None	None	antibiotic efflux
Agrobacterium fabrum strain 1530	tet(38)	tetracycline antibiotic	tetracycline	antibiotic efflux
Staphylococcus aureus	tet(38)	tetracycline antibiotic	tetracycline	antibiotic efflux
Shigella sonnei	tet(A)	tetracycline antibiotic	tetracycline	antibiotic efflux
Corynebacterium glutamicum	tet(Z)	tetracycline antibiotic	tetracycline	antibiotic efflux
Klebsiella pneumoniae	SHV-98	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-148	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-50	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-10	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	CTX-M-160	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-167	monobactam;cephalosporin	ceftazidime;betipicolin	antibiotic inactivation
Aeromonas veronii bv. veronii	cmrA6	carbapenem	None	antibiotic inactivation
Mycolicibacterium smegmatis	hcr1	rifamycin antibiotic	rifampin;rifaximin;rifabutin	antibiotic inactivation
Escherichia coli	TEM-76	monobactam;cephalosporin	ceftazidime;betipicolin	antibiotic inactivation
Klebsiella pneumoniae	OXA-1	cephalosporin;penicillin beta-lactam	ceftazidime;amoxicillin;piperacillin;tazobactam;cefepime	antibiotic inactivation
Klebsiella pneumoniae	SHV-155	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-154	monobactam;cephalosporin	ceftazidime;betipicolin	antibiotic inactivation
Fluoribacter gormanii	OXA-29	penicillin beta-lactam	oxacillin	antibiotic inactivation
Enterobacter cloacae	IMI-1	carbapenem	None	antibiotic inactivation
Paenibacillus popilliae ATCC 14706	vanY4706 in vanF cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecium	vanS gene in vanA cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Pseudomonas aeruginosa	VIM-18	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	VIM-33	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	ACT-7	carbapenem;cephalosporin	None	antibiotic inactivation
Stenotrophomonas maltophilia	shlA-B	aminoglycoside antibiotic;cephalosporin;penicillin beta-lactam	None	antibiotic efflux

Escherichia coli	TEM-105	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;betipacidam	antibiotic inactivation
Klebsiella pneumoniae	OXA-47	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Escherichia coli	TEM-190	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;betipacidam	antibiotic inactivation
Pseudomonas aeruginosa	IMP-45	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella variicola	LEN-11	penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-116	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	SHV-189	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-44	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
uncultured bacterium	dfrB2	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Acinetobacter baumannii	OXA-149	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Escherichia coli	TEM-111	monobactam;cephalosporin;penicillin beta-lactam	ceftazidime;betipacidam	antibiotic inactivation
Bacillus subtilis subsp. subtilis str. 168		fluoroquinolone antibiotic;disinfecting agents and antiseptics		antibiotic efflux
Acinetobacter sp. CIP-A165	ACC(6')-Ik	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Acinetobacter baumannii	OXA-200	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Escherichia coli	FosA4	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Klebsiella pneumoniae	OXA-247	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Enterococcus faecium	vanA	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Pseudomonas aeruginosa	IMP-9	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-144	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	SHV-7	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter johnsonii	OXA-309	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Klebsiella pneumoniae	QnrA1	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;amifloxacin	antibiotic target protection
Escherichia coli	CMY-7	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-82	cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	dfrA1	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Escherichia coli	QnrB74	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;amifloxacin	antibiotic target protection
Stenotrophomonas maltophilia	ACC(6')-Iz	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation

Streptomyces fradiae	tlrC	macrolide antibiotic;lincosamide antibiotic	streptomycin;mycinamycin	antibiotic target protection
Salmonella enterica subsp. Enteritidis serovar Derby	CTX-M-83	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-215	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Klebsiella pneumoniae	TEM-24	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Acinetobacter baumannii	OXA-250	carbapenem;penicillin beta-lactam	taxactin	antibiotic inactivation
Escherichia coli	TEM-189	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Proteus mirabilis	CTX-M-89	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	IMP-27	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Acinetobacter lwoffii	OXA-335	carbapenem;penicillin beta-lactam	taxactin	antibiotic inactivation
Klebsiella pneumoniae	SHV-145	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	aadA6	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Escherichia coli	CTX-M-129	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	QnrB60	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin;gatifloxacin	antibiotic target protection
Klebsiella pneumoniae	SHV-178	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Mycobacteroides abscessus	Fim(41)	macrolide antibiotic;lincosamide antibiotic	erythromycin;streptomycin	antibiotic target protection
Klebsiella pneumoniae	DHA-3	cephalosporin	None	antibiotic inactivation
Enterobacter sp. 87F-2	OXA-370	carbapenem;penicillin beta-lactam	taxactin	antibiotic inactivation
Enterobacter cloacae	CTX-M-37	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-76	cephalosporin	None	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-213	carbapenem;penicillin beta-lactam	taxactin	antibiotic inactivation
Klebsiella pneumoniae	SHV-165	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-104	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-132	carbapenem;penicillin beta-lactam	taxactin	antibiotic inactivation
Hafnia alvei	ACC-2	monobactam;cephalosporin	ceftazidime;betactam	antibiotic inactivation
Escherichia coli	TEM-57	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Acinetobacter baumannii	OXA-84	carbapenem;penicillin beta-lactam	taxactin	antibiotic inactivation
Citrobacter freundii	CMY-84	cephalosporin	None	antibiotic inactivation

Escherichia coli	QnrB43	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;amifloxicin;gatifloxacin	antibiotic target protection
Proteus mirabilis	TEM-123	monobactam;cephalosporin	ceftazidime;betipicilam	antibiotic inactivation
Micromonospora chalicea	AAC(3)-IXa	aminoglycoside antibiotic	neomycin	antibiotic inactivation
Acinetobacter baumannii	OXA-173	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-62	cephalosporin	None	antibiotic inactivation
Salmonella enterica subsp. Enterica serovar Typhimurium	TEM-106	monobactam;cephalosporin	ceftazidime;betipicilam	antibiotic inactivation
Escherichia coli	CTX-M-15	cephalosporin;penicillin beta-lactam	cefazolin;ceftazidime;ceftriaxone;ampicillin	antibiotic inactivation
Klebsiella pneumoniae	SHV-163	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-17	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-18	penicillin beta-lactam	None	antibiotic inactivation
Providencia stuartii	TEM-60	monobactam;cephalosporin	ceftazidime;betipicilam	antibiotic inactivation
Acinetobacter baumannii	OXA-424	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Chryseobacterium indologenes	ND-8	carbapenem	None	antibiotic inactivation
uncultured bacterium	aadA8	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Klebsiella pneumoniae	QnrB31	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;amifloxicin;gatifloxacin	antibiotic target protection
Klebsiella oxytoca	OXY-2-3	monobactam;cephalosporin	None	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-322	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Burkholderia pseudomallea	OXA-57657	penicillin beta-lactam	oxacillin	antibiotic inactivation
Citrobacter sp. TR21_24	QnrB72	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;amifloxicin;gatifloxacin	antibiotic target protection
Acinetobacter calcoaceticus	OXA-331	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	dfrA15	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Mycolicibacterium fortuitum	APH(3'')-Ic	aminoglycoside antibiotic	streptomycin	antibiotic inactivation
Acinetobacter baumannii	dfrA7	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Enterococcus faecium	msrC	macrolide antibiotic;streptogramin antibiotic	erythromycin;clindamycin;streptogramin B;azithromycin	antibiotic target protection
uncultured bacterium BLR-3	BLR-3	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli str. K-12 substr. W3110	subS	nucleoside antibiotic;disinfecting agent	ampicillin	antibiotic efflux
Klebsiella pneumoniae	SHV-179	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation

Photobacterium damsela	pppLsp. piscicida	phenicol antibiotic	chloramphenicol;florfenicol	antibiotic efflux
Klebsiella pneumoniae	OKP-A-1	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	FosC2	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Pseudomonas aeruginosa	VIM-7	carbapenem;cephalosporin	Nonepenicillin beta-lactam	antibiotic inactivation
Staphylococcus aureus	mphC	macrolide antibiotic	erythromycin;roxithromycin	antibiotic inactivation
Alkalihalobacillus clausii	blaR1	penicillin beta-lactam	None	antibiotic inactivation
Shigella sonnei	TEM-196	monobactam;cephalosporin	ceftazidime;betapicaltam	antibiotic inactivation
Klebsiella oxytoca	CMY-5	cephalosporin	None	antibiotic inactivation
Streptomyces lincolnensis	slmrA	lincosamide antibiotic;nucleoside antibiotic	clindamycin;puromycin	antibiotic target alteration
Enterobacter cloacae	AAC(6')-Ib8	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin	antibiotic inactivation
Enterobacter cloacae	NmcR	carbapenem;cephalosporin	ceftazidime;betapicaltam	antibiotic inactivation
Micromonospora zionensis	sgm	aminoglycoside antibiotic	dibekacin;amikacin;gentamicin	antibiotic target alteration
Streptococcus pneumoniae	penA ^{GR4}	fluoroquinolone antibiotic	ciprofloxacin;norfloxacin	antibiotic efflux
Pseudomonas aeruginosa	aadA13	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Klebsiella pneumoniae	SHV-3	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-20	penicillin beta-lactam	None	antibiotic inactivation
Streptococcus pneumoniae	penA ^{BGR4}	fluoroquinolone antibiotic	ciprofloxacin;norfloxacin	antibiotic efflux
Escherichia coli	APH(3')-IIa	aminoglycoside antibiotic	neomycin;ribostamycin;butirosin	antibiotic inactivation
Klebsiella pneumoniae	TEM-4	monobactam;cephalosporin	ceftazidime;betapicaltam	antibiotic inactivation
Salmonella enterica subspecies A serovar Corvalles	AAC(6')-Ib7	aminoglycoside antibiotic	amikacin;kanamycin A;tobramycin	antibiotic inactivation
uncultured bacterium BLR10	R1RA-10	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
uncultured bacterium BLR7	R7RA-7	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Staphylococcus aureus	vgaC	lincosamide antibiotic;streptogramin antibiotic	lincomycin;azithromycin;streptogramin C	antibiotic target alteration
Burkholderia cepacia	opcM	fluoroquinolone antibiotic;aminoglycoside antibiotic	None	antibiotic efflux
Klebsiella pneumoniae	CMY-36	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-33	carbapenem;cephalosporin	Nonepenicillin beta-lactam	antibiotic inactivation
Acinetobacter lwoffii	NDM-14	carbapenem;cephalosporin	Nonepenicillin beta-lactam	antibiotic inactivation

Acinetobacter sp. CIP 56	OXA-287	carbapenem;penicillin beta-lactam	antibiotic inactivation
Escherichia coli str. K-12	Escherichia coli folP with	sulfonamide antibiotic resistance	sulfadiazine;s

Staphylococcus	Staphylococcus aureus gyrA conferring resistance to tetracycline; quinolones	fluoroquinolones; tetracycline	levofloxacin; ciprofloxacin	efflux pump; target alteration
Enterococcus faecium	Enterococcus faecium clpP conferring resistance to daptomycin	daptomycin		antibiotic target alteration
Enterococcus faecium	vanX gene in vanM cluster	glycopeptide antibiotic	vancomycin; teicoplanin	antibiotic target alteration
Streptomyces rimosus	otr(C)	tetracycline antibiotic	tetracycline	antibiotic efflux
Campylobacter jejuni	tet(O)	tetracycline antibiotic	tetracycline; doxycycline	antibiotic target alteration
Streptococcus pyogenes	tet(T)	tetracycline antibiotic	tetracycline; doxycycline	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid	isoniazid	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin	streptomycin	antibiotic target alteration
Staphylococcus aureus	Staphylococcus aureus	epidermolytic resistance to daptomycin	daptomycin	antibiotic target alteration
Klebsiella pneumoniae	Klebsiella mutant PhoP conferring resistance to polymyxin B	polymyxin B	polymyxin B	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	ethambutol	ethambutol	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	ethambutol	ethambutol	antibiotic target alteration
Bartonella bacilliformis K583	Bartonella bacilliformis gyrA conferring resistance to clarithromycin	clarithromycin	clarithromycin	antibiotic target alteration
Enterobacter cloacae complex	PEC-41	carbapenem; cephalosporins	meropenem; ceftazidime	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid	isoniazid	antibiotic target alteration
Staphylococcus aureus	Staphylococcus aureus	epidermolytic resistance to clarithromycin	clarithromycin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin	streptomycin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid	isoniazid	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 16S rRNA conferring resistance to tetracycline	tetracycline	tetracycline	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid	isoniazid	antibiotic target alteration
Neisseria gonorrhoeae	Neisseria gonorrhoeae 16S rRNA conferring resistance to spectinomycin	spectinomycin	spectinomycin	antibiotic target alteration
Escherichia coli	Escherichia coli EF-Tu mutants conferring resistance to tetracycline	tetracycline	tetracycline	antibiotic target alteration
Escherichia coli CFT073	Escherichia coli EF-Tu mutants conferring resistance to tetracycline	tetracycline	tetracycline	antibiotic target alteration
Mycobacterium	Mycobacteroides chelonae 16S rRNA conferring resistance to kanamycin	kanamycin	kanamycin	antibiotic target alteration
Clostridioides difficile	Clostridioides difficile EF-Tu mutants conferring resistance to rifampin	rifampin	rifampin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli gyrA conferring resistance to ciprofloxacin	ciprofloxacin	ciprofloxacin	antibiotic target alteration

Escherichia coli str. K-12	Escherichia coli 655 soxR with mutation	fluoroquinolone antibiotic	tigecycline; rifampicin; polymyxin; streptomycin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 101 parE conferring resistance	antibiotic	quinolones;iprofloxacin;levofloxacin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 655 soxS with mutation	fluoroquinolone antibiotic	rigamycin; streptomycin; rifampicin	antibiotic target alteration
Klebsiella pneumoniae subsp. pneumoniae	Klebsiella pneumoniae MG-78578	aminoglycoside antibiotic	tigecycline; streptomycin; rifampicin	antibiotic target alteration
Mycobacterium leprae TN	Mycobacterium leprae for BCG	antibiotic	conferring resistance to dapsone	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin	conferring resistance to ethambutol	antibiotic target alteration
Salmonella enterica subsp. enterica	Salmonella enterica Typhimurium	fluoroquinolone antibiotic	fluoroquinolones;iprofloxacin;levofloxacin	antibiotic target alteration
Salmonella enterica subsp. enterica	Salmonella enterica Typhimurium	fluoroquinolone antibiotic	rigamycin; streptomycin; rifampicin	antibiotic target alteration
Enterococcus faecalis V583	Enterococcus faecalis liaF mutant	peptide antibiotic	daptomycin	antibiotic target alteration
Staphylococcus aureus subsp. aureus	Staphylococcus aureus RN4220	aminoglycoside antibiotic	streptomycin; rifampicin; cotrimoxazole	antibiotic target alteration
Streptococcus pyogenes MCA58232	Streptococcus pyogenes	sulfonamide antibiotic	sulfasalazine; sulfadiazine	antibiotic target alteration
Pasteurella multocida 3695	Pasteurella multocida 163	aminoglycoside antibiotic	gentamicin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 655 EF-Tu mutant	macrolide antibiotic	erythromycin; clindamycin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin	conferring resistance to streptomycin	antibiotic target alteration
Clostridium perfringens	LnuP	lincosamide antibiotic	lincomycin	antibiotic inactivation
Bacillus subtilis subsp. subtilis	Bacillus subtilis mprF	peptide antibiotic	defensin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin	conferring resistance to rifampicin	antibiotic target alteration
Staphylococcus aureus	Staphylococcus aureus mprF mutant	peptide antibiotic	conferring resistance to daptomycin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid	conferring resistance to isoniazid	antibiotic target alteration
Neisseria gonorrhoeae	Neisseria gonorrhoeae pen-10	carbapenem; carbapenemase	meropenem; piperacillin; ticarcillin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin	conferring resistance to ethambutol	antibiotic target alteration
Mycobacterium leprae TN	Mycobacterium leprae gyrB	fluoroquinolone antibiotic	fluoroquinolones;iprofloxacin;levofloxacin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 16S rRNA (misB)	aminoglycoside antibiotic	gentamicin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 16S rRNA (misB)	aminoglycoside antibiotic	G418	antibiotic target alteration
Salmonella enterica subsp. enterica	Salmonella enterica 16S rRNA (glsD)	aminoglycoside antibiotic	gentamicin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin	conferring resistance to streptomycin	antibiotic target alteration
Mycobacterium smegmatis	Mycobacterium smegmatis 16S rRNA (msbA)	aminoglycoside antibiotic	gentamicin	antibiotic target alteration

Staphylococcus	Staphylococcus aureus p40	fluoroquinolone resistance	enoxacin; pefloxacin; levofloxacin	efflux; target alteration
Morganella morganii subsp. Morganella	Morganella morganii gyrB	fluoroquinolone resistance	enoxacin; pefloxacin; levofloxacin	efflux; target alteration
Mycobacterium leprae TN	Mycobacterium leprae gyrA	fluoroquinolone resistance	enoxacin; pefloxacin; levofloxacin	efflux; target alteration
Salmonella enterica subsp. Enterica	Salmonella enterica Typhimurium	fluoroquinolone resistance	enoxacin; pefloxacin; levofloxacin	efflux; target alteration
Klebsiella aerogenes	Klebsiella aerogenes Omp36	monobactam; carbapenem	ceftriaxone; piperacillin; ticarcillin	permeability to antibiotics
Escherichia coli str. K-12	Escherichia coli 16S rRNA	aminoglycoside antibiotic	resistance to spectinomycin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 16S rRNA	aminoglycoside antibiotic	resistance to paromomycin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 16S rRNA	aminoglycoside antibiotic	resistance to tobramycin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 16S rRNA	aminoglycoside antibiotic	resistance to spectinomycin	antibiotic target alteration
Salmonella enterica subsp. Enterica	Salmonella enterica Agona	Rifampin	tephacycline; rifampin; rifaximin; rifabutin; rifapentine	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis 16S rRNA	nitroimidazole	resistance to viomycin	antibiotic target alteration
Neisseria meningitidis MO56	Neisseria meningitidis 16S rRNA	aminoglycoside antibiotic	resistance to spectinomycin	antibiotic target alteration
None	glycopeptide resistance	glycopeptide antibiotic	vancomycin	antibiotic target alteration
None	glycopeptide resistance	glycopeptide antibiotic	vancomycin; teicoplanin	antibiotic target alteration
None	glycopeptide resistance	glycopeptide antibiotic	vancomycin	antibiotic target alteration
None	glycopeptide resistance	glycopeptide antibiotic	vancomycin	antibiotic target alteration
None	glycopeptide resistance	glycopeptide antibiotic	vancomycin	antibiotic target alteration
None	glycopeptide resistance	glycopeptide antibiotic	vancomycin	antibiotic target alteration
None	glycopeptide resistance	glycopeptide antibiotic	vancomycin; teicoplanin	antibiotic target alteration
None	glycopeptide resistance	glycopeptide antibiotic	vancomycin	antibiotic target alteration
None	glycopeptide resistance	glycopeptide antibiotic	vancomycin	antibiotic target alteration
None	glycopeptide resistance	glycopeptide antibiotic	vancomycin; teicoplanin	antibiotic target alteration
None	glycopeptide resistance	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Pseudomonas aeruginosa PDC-4		monobactam; carbapenem	ceftazidime; meropenem	antibiotic inactivation
Pseudomonas aeruginosa TPAO1		disinfecting agents and antiseptics	antiseptics	antibiotic efflux
Pseudomonas aeruginosa TPAO1		disinfecting agents and antiseptics	antiseptics	antibiotic efflux
Pseudomonas aeruginosa TPAO1		disinfecting agents and antiseptics	antiseptics	antibiotic efflux

Pseudomonas aeruginosa	OPAD1	disinfecting agents and antiseptics	None	antibiotic efflux
Acinetobacter baumannii	OXA-480	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Enterobacter cloacae complex	NDK-42	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PBA01	glycopeptide antibiotic	ceftiofur;ceftazidime;cefepime;ceftolozone	antibiotic target alteration
Pseudomonas aeruginosa	amexP	macrolide antibiotic;carbapenem	erythromycin;clarithromycin	antibiotic target alteration
Acinetobacter baumannii	ADC-104	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	amexQ	macrolide antibiotic;carbapenem	erythromycin;clarithromycin	antibiotic target alteration
Salmonella enterica subspecies I	Salmonella enterica Typhimurium	fluoroquinolone antibiotic	ciprofloxacin	antibiotic target alteration
Chlamydia psittaci 6BC	Chlamydophila psittaci 16S rRNA	glycoside antibiotic	spectinomycin	antibiotic target alteration
Borrelia burgdorferi	Borrelia burgdorferi 16S rRNA	glycoside antibiotic	gentamicin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis 16S rRNA	glycoside antibiotic	kanamycin	antibiotic target alteration
Borrelia burgdorferi	Borrelia burgdorferi 16S rRNA	glycoside antibiotic	gentamicin	antibiotic target alteration
Borrelia burgdorferi	Borrelia burgdorferi 16S rRNA	glycoside antibiotic	spectinomycin	antibiotic target alteration
Mycobacterium	Mycobacteroides chelonae	glycoside antibiotic	neomycin	antibiotic target alteration
Mycobacteroides abscessus	Mycobacteroides abscessus 16S rRNA	glycoside antibiotic	gentamicin	antibiotic target alteration
Mycobacterium	Mycobacteroides chelonae	glycoside antibiotic	tobramycin	antibiotic target alteration
Mycobacteroides abscessus	Mycobacteroides abscessus 16S rRNA	glycoside antibiotic	amikacin	antibiotic target alteration
Mycobacteroides abscessus	Mycobacteroides abscessus 16S rRNA	glycoside antibiotic	neomycin	antibiotic target alteration
Cutibacterium acnes	Cutibacterium acnes 16S rRNA	acycluronic acid	tetracycline	antibiotic target alteration
Mycobacterium	Mycobacteroides chelonae	glycoside antibiotic	amikacin	antibiotic target alteration
Mycobacterium	Mycobacteroides chelonae	glycoside antibiotic	gentamicin	antibiotic target alteration
Mycobacteroides abscessus	Mycobacteroides abscessus 16S rRNA	glycoside antibiotic	kanamycin	antibiotic target alteration
Mycobacteroides abscessus	Mycobacteroides abscessus 16S rRNA	glycoside antibiotic	tobramycin	antibiotic target alteration
Pseudomonas aeruginosa	PBA01	glycopeptide antibiotic	ceftiofur;ceftazidime;cefepime;ceftolozone	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 16S rRNA	glycoside antibiotic	kanamycin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 16S rRNA	glycoside antibiotic	streptomycin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 16S rRNA	glycoside antibiotic	streptomycin	antibiotic target alteration

Escherichia coli str. K-12	Escherichia coli 16S rRNA (rrsB)	aminoglycoside antibiotic resistance	gentamicin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 655 parC conferring resistance	fluoroquinolone antibiotics	ciprofloxacin; levofloxacin	antibiotic target alteration
Mycoplasma hominis	Mycoplasma hominis parC conferring resistance	fluoroquinolone antibiotics	ciprofloxacin; levofloxacin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 16S rRNA (rrsC)	aminoglycoside antibiotic resistance	kanamycin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 16S rRNA (rrsB)	aminoglycoside antibiotic resistance	tetracycline	antibiotic target alteration
Mycolicibacterium smegmatis	Mycolicibacterium smegmatis 16S rRNA (rrsB)	aminoglycoside antibiotic resistance	kanamycin	antibiotic target alteration
Mycolicibacterium smegmatis	Mycolicibacterium smegmatis 16S rRNA (rrsB)	aminoglycoside antibiotic resistance	kanamycin	antibiotic target alteration
Mycolicibacterium smegmatis	Mycolicibacterium smegmatis 16S rRNA (rrsB)	aminoglycoside antibiotic resistance	kanamycin	antibiotic target alteration
Mycolicibacterium smegmatis	Mycolicibacterium smegmatis 16S rRNA (rrsB)	aminoglycoside antibiotic resistance	kanamycin	antibiotic target alteration
Mycolicibacterium smegmatis	Mycolicibacterium smegmatis 16S rRNA (rrsB)	aminoglycoside antibiotic resistance	kanamycin	antibiotic target alteration
Mycolicibacterium smegmatis	Mycolicibacterium smegmatis 16S rRNA (rrsB)	aminoglycoside antibiotic resistance	kanamycin	antibiotic target alteration
Mycolicibacterium smegmatis	Mycolicibacterium smegmatis 16S rRNA (rrsB)	aminoglycoside antibiotic resistance	kanamycin	antibiotic target alteration
Mycolicibacterium smegmatis	Mycolicibacterium smegmatis 16S rRNA (rrsB)	aminoglycoside antibiotic resistance	kanamycin	antibiotic target alteration
Mycolicibacterium smegmatis	Mycolicibacterium smegmatis 16S rRNA (rrsB)	aminoglycoside antibiotic resistance	kanamycin	antibiotic target alteration
Pseudomonas aeruginosa	PAO1	macrolide antibiotic;tetracycline antibiotic	erythromycin;tetracycline	antibiotic efflux
Pseudomonas aeruginosa	PAO1	macrolide antibiotic;tetracycline antibiotic	erythromycin;tetracycline	antibiotic efflux
Pseudomonas aeruginosa	PAO1	macrolide antibiotic;fluoroquinolone antibiotic	ciprofloxacin;erythromycin	antibiotic efflux
Pseudomonas aeruginosa	PAO1	macrolide antibiotic;fluoroquinolone antibiotic	ciprofloxacin;erythromycin	antibiotic efflux
Pseudomonas aeruginosa	opmE	macrolide antibiotic;carbapenem antibiotic	erythromycin;meropenem	antibiotic efflux
Pseudomonas aeruginosa	amxM	phenicol antibiotic	chloramphenicol	antibiotic efflux
Pseudomonas aeruginosa	amxN	phenicol antibiotic	chloramphenicol	antibiotic efflux
Pseudomonas aeruginosa	AAC(6')-Iaj	aminoglycoside antibiotic	dibekacin;amikacin	antibiotic inactivation
Vibrio cholerae	VCC-1	monobactam;carbapenem	meropenem;imipenem	antibiotic inactivation
Pedobacter sp. SI-33	PEDO-1	carbapenem	None	antibiotic inactivation
Pedobacter sp. ALS-14	PEDO-2	carbapenem	None	antibiotic inactivation
Pedobacter sp. Stok-3	PEDO-3	carbapenem	None	antibiotic inactivation
Chryseobacterium sp. Stok-PS-1	ESP-1	carbapenem	None	antibiotic inactivation
Chryseobacterium sp. Stok-SP-1	ESP-1	carbapenem	None	antibiotic inactivation
Massilia sp. SB1-3	MSI-1	carbapenem	None	antibiotic inactivation

Massilia sp. SB1-3	MSI-OXA	carbapenem	None	antibiotic inactivation
Sphingomonas sp. ALS-1	SPG-1	carbapenem	None	antibiotic inactivation
Acinetobacter sp. CIP 70	OXA-288	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Serratia fonticola	FONA-2	penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-118	monobactam;carbapenem	None	antibiotic inactivation
Streptomyces coelicolor A3(2)	As(2)	glycopeptide antibiotic	teicoplanin	antibiotic target alteration
Staphylococcus saprophyticus	fusB	fusidane antibiotic	fusidic acid	antibiotic target protection
Escherichia coli	QnrS11	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and rifloxacin	antibiotic target protection
Acinetobacter baumannii	ADC-105	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	LpxA	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Acinetobacter baumannii	LpxC	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Planobispora rosea	Planobispora rosea EF-Tu	chlamydiae antibiotic;streptococcus	GE2270A inhibitor GE2270A	Antibiotic target alteration
Photobacterium damsela	ampB Sp. damsela	macrolide antibiotic	erythromycin;clarithromycin;azithromycin	antibiotic inactivation
Pseudomonas aeruginosa	PBAO1	carbapenem;carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Desulfitobacterium hafniense	naeI	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Acinetobacter baumannii	OXA-346	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	OXA-439	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Brachyspira pilosicoli	OXA-477	penicillin beta-lactam	oxacillin	antibiotic inactivation
Yersinia enterocolitica	vatF	streptogramin antibiotic;streptogramin	streptogramin A;teicoplanin	antibiotic inactivation
synthetic construct	InuE	lincosamide antibiotic	lincomycin	antibiotic inactivation
Streptomyces antibioticus	soleC	macrolide antibiotic	oleandomycin	antibiotic efflux
Mammaliicoccus sciuri	saIA	lincosamide antibiotic;streptogramin	streptogramin A;teicoplanin	antibiotic inactivation
Streptococcus pneumoniae	elmA(II)	macrolide antibiotic;lincosamide	erythromycin;azithromycin	antibiotic target alteration
Citrobacter freundii	ACT-38	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	QnrS10	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and rifloxacin	antibiotic target protection
Enterococcus faecium	vanS gene in vanD cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Pseudomonas aeruginosa	PvrR	aminoglycoside antibiotic;penicillin	penicillin;beta-lactam;teicoplanin	antibiotic inactivation

Listeria monocytogenes EC50	Listeria monocytogenes mprF	peptide antibiotic	defensin	antibiotic target alteration
Brucella suis 1330	Brucella suis mprF	peptide antibiotic	defensin	antibiotic target alteration
Clostridium perfringens S0101	Clostridium perfringens mpeF	peptide antibiotic	defensin	antibiotic target alteration
Streptococcus agalactiae 260316	Streptococcus agalactiae mprF	peptide antibiotic	defensin	antibiotic target alteration
Staphylococcus aureus	Staphylococcus aureus ileS	pleuromutilin antibiotic	resistance to mupirocin	antibiotic target alteration
Escherichia coli ATCC 25922	Escherichia coli murA with phosphonic acid	phosphonic acid	resistance to fosfomicin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis phoP	phosphonic acid	resistance to fosfomicin	antibiotic target alteration
Mycoplasma genitalium G37	Mycoplasma genitalium 23S rRNA	antibiotic; fluorquinolones; tetracycline	resistance to fosfomicin	antibiotic target alteration
Bacillus thuringiensis	mphM	macrolide antibiotic	erythromycin	antibiotic inactivation
Pseudomonas aeruginosa	acmIA8	phenicol antibiotic	chloramphenicol	antibiotic efflux
Desulfitobacterium hafniense DCB2	vanR51 gene in vanI cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Desulfitobacterium hafniense DCB2	vanX2 gene in vanI cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Staphylococcus aureus	Staph. aureus MSSA476	fusidane antibiotic	fusidic acid	antibiotic target protection
Staphylococcus aureus	Staphylococcus aureus mpeF	peptide antibiotic	defensin	antibiotic target alteration
Acinetobacter baumannii	LpxD	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Enterococcus faecalis	optrA	oxazolidinone antibiotic; pleuromutilin	linezolid;chloramphenicol; florfenicol;teicoplanin	antibiotic target protection
Enterococcus faecium	eatAv	pleuromutilin antibiotic	pleuromutilin	antibiotic target protection
Acinetobacter baumannii	ADC-106	cephalosporin	None	antibiotic inactivation
Staphylococcus aureus	Staphylococcus MRSA252	phosphonic acid	resistance to fosfomicin	antibiotic target alteration
Acinetobacter baumannii	ADC-10	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-30	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-58	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-11	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	SPM-1	carbapenem	None	antibiotic inactivation
Escherichia coli	ACT-8	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Acinetobacter baumannii	ADC-59	cephalosporin	None	antibiotic inactivation
Borrelia burgdorferi B3	Borrelia burgdorferi mprF	phosphonic acid	resistance to fosfomicin	antibiotic target alteration

Escherichia coli	AAC(3)-Ile	aminoglycoside antibiotic	dibekacin;sisomicin;netilmicin;bramycin;St-On	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	sisomicin-like antibiotic with isoniazid conferring resistance	and antibiotic target alteration	
Escherichia coli O25b:H4	gadW	macrolide antibiotic;fluoroquinolone antibiotic	erythromycin;clotrimazole;clindamycin;claflicin	
Clostridioides difficile	cdeA	fluoroquinolone antibiotic;disinfecting agents and antiseptics	and antibiotic efflux	
Achromobacter dolens	OXA-364	penicillin beta-lactam	oxacillin	antibiotic inactivation
Streptomyces cinnamomeus	Streptomyces cinnamomeus	elfamycin antibiotic conferring resistance	to elfamycin	antibiotic target alteration
Campylobacter jejuni subsp. Campylobacter jejuni	Campylobacter jejuni ATCC 700689	ATCC 700689 resistance	to fluoroquinolones	antibiotic target alteration
Enterococcus faecalis V583	Enterococcus faecalis Yp	Peptide antibiotic conferring daptomycin resistance		antibiotic target alteration
Enterococcus faecalis V583	Enterococcus faecalis dmp	Peptide antibiotic conferring daptomycin resistance		antibiotic target alteration
Enterococcus faecalis V583	Enterococcus faecalis gdp	Peptide antibiotic conferring daptomycin resistance		antibiotic target alteration
Acinetobacter baumannii	Acinetobacter baumannii	glycoconfering resistance	to ceftriaxone;cefepime;meropenem;levofloxacin;target alteration	
Enterococcus faecalis	Enterococcus faecalis gs	Peptide antibiotic conferring daptomycin resistance		antibiotic target alteration
Enterococcus faecalis V583	Enterococcus faecalis Yp	Peptide antibiotic conferring daptomycin resistance		antibiotic target alteration
Acinetobacter baumannii	OXA-440	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Enterococcus faecium	Enterococcus faecium lia	Peptide antibiotic conferring daptomycin resistance		antibiotic target alteration
Enterococcus faecalis V583	Enterococcus faecalis lia	Peptide antibiotic conferring daptomycin resistance		antibiotic target alteration
Enterococcus faecalis V583	Enterococcus faecalis lia	Peptide antibiotic conferring daptomycin resistance		antibiotic target alteration
Brachyspira pilosicoli	OXA-478	penicillin beta-lactam	oxacillin	antibiotic inactivation
Nocardia farcinica	FAR-1	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella variicola subsp. LEOP-44	LEOP-44	penicillin beta-lactam	None	antibiotic inactivation
Serratia marcescens	TLA-3	monobactam;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-60	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	MOX-9	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Serratia marcescens	AAC(6')-Ian	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin;netilmicin;bramycin	antibiotic inactivation
Enterobacter cloacae	FRI-1	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli str. K-12 subsp. Str. MG1655	Str. MG1655	aminoglycoside antibiotic	kanamycin A	antibiotic efflux
Klebsiella pneumoniae	LEN-26	penicillin beta-lactam	None	antibiotic inactivation

Oligella urethralis	ADC-2	cephalosporin	None	antibiotic inactivation
Escherichia coli	AAC(3)-IIId	aminoglycoside antibiotic	dibekacin;sisomicin;netilmicin;biciclin;sisomicin	antibiotic inactivation
Bifidobacterium breve	Erm(49)	macrolide antibiotic;lincosamide antibiotic	erythromycin;clarithromycin;streptogramin antibiotic	antibiotic target alteration
Acinetobacter baumannii	ADC-188	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	carO	carbapenem	meropenem;imipenem	reduced permeability to antibiotic
Staphylococcus aureus subsp. aureus MW2	Staphylococcus aureus MW2sA with peptide antibiotic	peptide antibiotic	cladogramycin	antibiotic target alteration
Staphylococcus aureus subsp. aureus MRSA252	Staphylococcus aureus MRSA252 with peptide antibiotic	peptide antibiotic	cladogramycin	antibiotic target alteration
Acinetobacter	Acinetobacter baumannii	fluoroquinolone resistance to fluoroquinolones	levofloxacin;levofloxacin	antibiotic target alteration
Acinetobacter baumannii	Acinetobacter baumannii	carbapenem resistance to carbapenems	imipenem;meropenem	antibiotic target alteration
Myroides odoratimimus	MUS-2	carbapenem;penicillin beta-lactam	tazobactam;piperacillin;ticarcillin	antibiotic inactivation
Escherichia coli	AAC(6')-Im	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Acinetobacter baumannii	ADC-67	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-73	cephalosporin	None	antibiotic inactivation
Klebsiella aerogenes	AAC(6')-II	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Klebsiella pneumoniae	qnrE1	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Escherichia coli	qnrE2	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Corynebacterium striatum	Corynebacterium striatum	penicillin beta-lactam;tetracycline antibiotic	oxacillin;oxacillin	antibiotic efflux
Salmonella enterica subsp. enterica	dfrA15	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Alkalihalobacillus halodurans	Erm(K)	macrolide antibiotic;lincosamide antibiotic	erythromycin;streptogramin antibiotic	antibiotic target alteration
Proteus mirabilis	dfrA6 from Proteus mirabilis	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Yersinia ruckeri	dfrI	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Aeromonas hydrophila	AQU-2	cephalosporin	None	antibiotic inactivation
Clostridioides difficile	cfr(B)	lincosamide antibiotic;streptogramin antibiotic	clindamycin;streptogramin antibiotic	antibiotic target alteration
Pseudomonas aeruginosa	ACO1	None	None	antibiotic efflux
Escherichia coli str. K-12	Escherichia coli UhpT with phosphonic acid	phosphonic acid	fosfomicin	antibiotic target alteration
Pseudomonas aeruginosa	Pseudomonas mutant PhlA	polymyxin B	polymyxin B	antibiotic target alteration
Acinetobacter baumannii	ADC-1	cephalosporin	None	antibiotic inactivation

Acinetobacter baumannii	ADC-3	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-4	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-6	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-7	cephalosporin	None	antibiotic inactivation
Acinetobacter baylyi ADP-1	ADC-8	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-5	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-12	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-156	cephalosporin	None	antibiotic inactivation
Escherichia coli	QnrS12	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;and ofloxacin	antibiotic target protection
Alkalihalobacillus clausii	ANT(4')-Ib	aminoglycoside antibiotic	dibekacin;amikacin;tobramycin	antibiotic inactivation
Acinetobacter baumannii	ADC-62	cephalosporin	None	antibiotic inactivation
Helcococcus kunzii	Erm(47)	macrolide antibiotic;lincosamide antibiotics	erythromycin;streptomycin	antibiotic target protection
Citrobacter freundii	dfrA3b	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Aeromonas dhakensis	AQU-3	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	LEN-17	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli str. K-12	Escherichia coli uhpA with phosphonate	phosphonic acid aminoglycosides	fosfomycin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli cyaA with phosphonate	phosphonic acid aminoglycosides	fosfomycin	antibiotic target alteration
Aeromonas sobria	OXA-368	cephalosporin;penicillin beta-lactam	ceftazidime;betapactam	antibiotic inactivation
Neisseria gonorrhoeae	TEM-220	monobactam;cephalosporin	ceftazidime;betapactam	antibiotic inactivation
Escherichia coli	oqxA	fluoroquinolone antibiotic;	tigecycline;ceftiofloxime;antibiotic;diflunonylprid	
Escherichia coli	oqxB	fluoroquinolone antibiotic;	tigecycline;ceftiofloxime;antibiotic;diflunonylprid	
Pseudomonas aeruginosa	aadA10	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Streptococcus pneumoniae	Streptococcus pneumoniae	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Ureaplasma parvum	Ureaplasma urealyticum	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Haemophilus parainfluenzae	Haemophilus parainfluenzae	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Haemophilus parainfluenzae	Haemophilus parainfluenzae	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Salmonella enterica subspecies	Salmonella enterica Typhimurium	fluoroquinolone antibiotic	ciprofloxacin	antibiotic target alteration

Neisseria gonorrhoeae F490	Apr090	tetracycline antibiotic	tetracycline	antibiotic target protection
Capnocytophaga gingivalis ATCC 35224	Capnocytophaga gingivalis	fluoroquinolone resistance	ciprofloxacin;levofloxacin	antibiotic target alteration
Acinetobacter sp. ANC 4105A-291		carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Salmonella enterica subspecies I serovar Typhimurium	Salmonella enterica Typhimurium	fluoroquinolone resistance	ciprofloxacin;levofloxacin	antibiotic target alteration
Staphylococcus aureus	apmA	aminoglycoside antibiotic	apramycin	antibiotic inactivation
Shigella flexneri 2a str. 305	Shigella flexneri gyrA conferring	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Shigella flexneri 2a str. 305	Shigella flexneri parC conferring	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Neisseria meningitidis MC58	Neisseria meningitidis PB2304	penicillin beta-lactam	ceftriaxone	antibiotic target alteration
Aspergillus fumigatus Af293	Aspergillus fumigatus	cephalosporin;penicillin beta-lactam	ceftazidime;ceftiofur	antibiotic inactivation
Citrobacter freundii	OXA-372	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Streptococcus pneumoniae Str 6	Streptococcus pneumoniae PB2304	penicillin beta-lactam	ceftriaxone	antibiotic target alteration
Paenibacillus sp. Y412M	C10A	lincosamide antibiotic;streptogramin	clindamycin	antibiotic inactivation
Acinetobacter baumannii	OXA-441	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Brachyspira pilosicoli	OXA-479	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	FIM-1	carbapenem;cephalosporin	None	antibiotic inactivation
Serratia fonticola	FONA-1	penicillin beta-lactam	None	antibiotic inactivation
Francisella philomiragia str. 1	Francisella philomiragia ATCC 25015	penicillin beta-lactam	None	antibiotic inactivation
Staphylococcus aureus subsp. aureus NCIT 0325	Staphylococcus aureus	peptide antibiotic	lysozyme	antibiotic target alteration
Staphylococcus aureus subsp. aureus MRSA252	Staphylococcus aureus	glycopeptide antibiotic	teicoplanin	antibiotic target alteration
Cutibacterium acnes subsp. acnes ATCC 35288	Cutibacterium acnes	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Staphylococcus aureus subsp. aureus MRSA252	Staphylococcus aureus	glycopeptide antibiotic	teicoplanin	antibiotic target alteration
Escherichia coli	QnrS15	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic target alteration
Streptomyces lividans	Erm(O)-Irm	macrolide antibiotic;lincosamide antibiotic	erythromycin;clindamycin	antibiotic target alteration
Enterococcus faecalis	efrA	macrolide antibiotic;fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic efflux
Enterococcus faecium	efrB	macrolide antibiotic;fluoroquinolone antibiotic	ciprofloxacin;levofloxacin	antibiotic efflux
Pseudomonas aeruginosa	PDC-384	monobactam;carbapenem	meropenem	antibiotic inactivation
Escherichia coli str. K-12 substr. MG1655	Escherichia coli	nitroimidazole antibiotic	metronidazole	antibiotic efflux

Haemophilus influenzae R2644		fluoroquinolone antibiotic;disinfecting agent	ciprofloxacin;gentamicin	antibiotic efflux
Clostridioides difficile	Clostridioides difficile 23S rRNA	macrolide antibiotic;lincomycin	erythromycin;clindamycin	antibiotic target alteration
Enterococcus faecium	efmA	macrolide antibiotic;fluoroquinolone antibiotic	erythromycin	antibiotic efflux
Mycobacterium tuberculosis H37Rv		rifamycin antibiotic;isoniazid	rifampin;isoniazid	antibiotic efflux
Neisseria meningitidis MC58A		antibacterial free fatty acids	palmitic acid;oleic acid;linoleic acid	antibiotic efflux
Neisseria meningitidis MC58B		antibacterial free fatty acids	palmitic acid;oleic acid;linoleic acid	antibiotic efflux
Escherichia coli	NDM-20	carbapenem;cephalosporin	meropenem	antibiotic inactivation
Helicobacter pylori 26695	hp1181	fluoroquinolone antibiotic;tetracycline antibiotic	ciprofloxacin;doxycycline	antibiotic efflux
Streptococcus pyogenes MCA S9429		macrolide antibiotic;lincomycin	erythromycin;clindamycin	antibiotic efflux
Pseudomonas aeruginosa PAO1	Pseudomonas mutant Phorac	fluoroquinolone antibiotic;polymyxin B	ciprofloxacin;polymyxin B	antibiotic efflux
Acinetobacter baumannii ADC-189		cephalosporin	None	antibiotic inactivation
Mycolicibacterium smegmatis MC2 155		fluoroquinolone antibiotic	ciprofloxacin;norfloxacin	antibiotic efflux
Enterococcus faecium	D-Ala-D-Ala ligase	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Escherichia coli str. K-12	catII from Escherichia coli	phenicol antibiotic	chloramphenicol	antibiotic inactivation
Proteus mirabilis	catA4	phenicol antibiotic	chloramphenicol	antibiotic inactivation
Listeria monocytogenes	catA8	phenicol antibiotic	chloramphenicol	antibiotic inactivation
Bacteroides fragilis	Mef(En2)	macrolide antibiotic;lincomycin	erythromycin	antibiotic efflux
Klebsiella oxytoca KON1	HatB11	phenicol antibiotic	chloramphenicol	antibiotic inactivation
Listeria monocytogenes FSL R2-561		lincosamide antibiotic	lincomycin	antibiotic inactivation
Staphylococcus aureus ssp. aureus	Staphylococcus aureus FosB	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Aeromonas veronii	MCR-3.3	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Staphylococcus cohnii	FusF	fusidane antibiotic	fusidic acid	antibiotic target protection
Staphylococcus aureus	Staphylococcus aureus nDNA	fluoroquinolone antibiotic	enoxacin;ciprofloxacin;norfloxacin	antibiotic efflux
Klebsiella pneumoniae subsp. pneumoniae H31266	Klebsiella pneumoniae H31266	beta-lactam;carbapenem	ceftriaxone;cefepime;ceftazidime	antibiotic target alteration
Klebsiella pneumoniae subsp. pneumoniae H31266	Klebsiella pneumoniae H31266	beta-lactam;carbapenem	ceftriaxone;cefepime;ceftazidime	antibiotic target alteration
Staphylococcus haemolyticus	FosB1	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Staphylococcus aureus	FosB4	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation

Burkholderia glumae	AAC(2')-IIa	aminoglycoside antibiotic	kasugamycin	antibiotic inactivation
Acinetobacter bohemicus	ANC-294	penicillin beta-lactam	oxacillin	antibiotic inactivation
Clostridium ljungdahlii DSM 5528	SMC-3528	Bifunctional antibiotic conferring resistance to rifampicin	rifampicin	antibiotic target alteration
Enterococcus faecium	emtA	macrolide antibiotic; lincosamide antibiotic; orthosomycin antibiotic	erythromycin	antibiotic target alteration
Staphylococcus aureus	FosB5	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Pseudomonas aeruginosa	saphA15	aminoglycoside antibiotic	neomycin; amikacin; netilmicin	antibiotic inactivation
Acinetobacter sp. NIPH 1857	OXA-292	carbapenem; penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter johnsonii	OXA-373	carbapenem; penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter baumannii	OXA-442	carbapenem; penicillin beta-lactam	ceftazidime	antibiotic inactivation
Enterobacter cloacae complex	NDT-43	carbapenem; cephalosporin	None	antibiotic inactivation
Escherichia coli	MCR-3.12	peptide antibiotic	colistin A; colistin B	antibiotic target alteration
Streptomyces lavendulae sta		nucleoside antibiotic	streptothricin	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	polymyxin B with thiazolidine conferring resistance to rifampicin	streptomycin	antibiotic target alteration
Halobacterium salinarum	Halobacterium salinarum	16S rRNA methylase conferring resistance to pactamycin	actinomycin	antibiotic target alteration
Helicobacter pylori 26695	Helicobacter pylori 16S rRNA methylase conferring resistance to tetracycline	None	tetracycline	antibiotic target alteration
Klebsiella variicola subsp. L2014	LEP-42	penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter sp. ANC 3929	OXA-293	carbapenem; penicillin beta-lactam	ceftazidime	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	pyrazinamide inhibiting pyrazinamide resistance to pyrazinamide	pyrazinamide	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid methylase conferring resistance to isoniazid	isoniazid	antibiotic target alteration
Mycobacteroides chelonae	Mycobacteroides chelonae	23S rRNA with mutation conferring resistance to clarithromycin	clarithromycin	antibiotic target alteration
uncultured bacterium Ak203	pepA	phenicol antibiotic	chloramphenicol; florfenicol	antibiotic efflux
Staphylococcus aureus	FosB6	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Klebsiella aerogenes	rmtD2	aminoglycoside antibiotic	amikacin; netilmicin; kanamycin	antibiotic target alteration
Streptomyces rimosus	APH(3')-VIIIa	aminoglycoside antibiotic	amikacin; kanamycin A	antibiotic inactivation
Paenibacillus sp. LC231	LlmA 23S ribosomal RNA methylase	lincomycin antibiotic	clindamycin	antibiotic target alteration
Paenibacillus sp. LC231	CatU	phenicol antibiotic	azidamfenicol; chloramphenicol	antibiotic inactivation
Paenibacillus sp. LC231	BahA	peptide antibiotic	bacitracin	antibiotic inactivation

Paenibacillus sp. LC231	TaeA	pleuromutilin antibiotic	pleuromutilin	antibiotic efflux
Paenibacillus sp. LC231	VatI	streptogramin antibiotic;streptogramin A	vancomycin;vanilandomycin	antibiotic inactivation
Paenibacillus sp. LC231	AAC(2')-IIb	aminoglycoside antibiotic	kasugamycin	antibiotic inactivation
Paenibacillus sp. LC231	AAC(6')-34	aminoglycoside antibiotic	kanamycin A	antibiotic inactivation
Paenibacillus sp. LC231	mphI	macrolide antibiotic	erythromycin;telithromycin	antibiotic inactivation
Paenibacillus sp. LC231	rphB	rifamycin antibiotic	rifampin;rifaximin;rifabutin	antibiotic inactivation
Paenibacillus sp. LC231	cpaA	aminoglycoside antibiotic	capreomycin	antibiotic inactivation
Transposon Tn4551	aadS	aminoglycoside antibiotic	streptomycin	antibiotic inactivation
Escherichia coli	MCR-1.5	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.11	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Clostridioides difficile 630	Clostridioides difficile rpoG	Glycopeptide antibiotic	resistant to vancomycin	antibiotic target alteration
Acinetobacter lwoffii	aadA27	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Pseudomonas aeruginosa PAO1	blaOXA-1	macrolide antibiotic;monobactams	tetracycline;erythromycin;clindamycin	antibiotic inactivation
Paenibacillus sp. LC231	tetA(58)	tetracycline antibiotic	tetracycline	antibiotic efflux
Paenibacillus sp. LC231	vgbC	streptogramin antibiotic;streptogramin B	antibiotic inactivation	antibiotic inactivation
Salmonella enterica subspecies I serovar Cuba	MCR-9.1	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	aadA8b	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Staphylococcus cohnii	vga(E) Staphylococcus cohnii	lipopeptide antibiotic;streptogramin	erythromycin;clindamycin;streptogramin A	antibiotic inactivation
uncultured bacterium	OXA-392	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Clostridioides difficile 630	Clostridioides difficile gyrA	fluoroquinolones antibiotic	ciprofloxacin;ofloxacin;enrofloxacin	antibiotic target alteration
Staphylococcus aureus	FosD	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Escherichia coli	rmtE	aminoglycoside antibiotic	amikacin;gentamicin A;gentamicin	antibiotic target alteration
Escherichia coli	MCR-1.7	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.12	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-4.2	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Acinetobacter sp. NIPH 753	OXA-294	penicillin beta-lactam	oxacillin	antibiotic inactivation
Brachyspira hyodysenteriae	aa(A)	pleuromutilin antibiotic	pleuromutilin	antibiotic target protection

Acinetobacter baumannii	OXA-400	carbapenem;penicillin beta-lactam	teicoplanin	antibiotic inactivation
None	glycopeptide resistance gene cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Ralstonia mannitolilytica	OXA-443	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter baumannii	OXA-482	carbapenem;penicillin beta-lactam	teicoplanin	antibiotic inactivation
Serratia fonticola	FONA-3	penicillin beta-lactam	None	antibiotic inactivation
Enterobacter asburiae	FRI-2	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella variicola subsp. Lp143	LEP-43	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-27	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	pyrazinamide	pyrazinamide to pyrazinamide	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid-like inhibition	isoniazid resistance to isoniazid	antibiotic target alteration
Acinetobacter baumannii	ADC-31	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-39	cephalosporin	None	antibiotic inactivation
Escherichia coli	rmtE2	aminoglycoside antibiotic	amikacin;kanamycin A;gentamicin A;gentamicin	antibiotic target alteration
Escherichia coli	MCR-1.8	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.13	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Enterobacter cloacae	MCR-4.3	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Acinetobacter baumannii	OXA-402	carbapenem;penicillin beta-lactam	teicoplanin	antibiotic inactivation
Acinetobacter baumannii	OXA-201	carbapenem;penicillin beta-lactam	teicoplanin	antibiotic inactivation
Acinetobacter sp. NIPH 2068	OXA-295	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-401	carbapenem;penicillin beta-lactam	teicoplanin	antibiotic inactivation
Acinetobacter baumannii	ADC-157	cephalosporin	None	antibiotic inactivation
Escherichia coli	tet(X4)	glycylcycline;tetracycline antibiotic	tigecycline;tetracycline	antibiotic inactivation
Ralstonia mannitolilytica	OXA-444	carbapenem;penicillin beta-lactam	teicoplanin	antibiotic inactivation
Acinetobacter baumannii	OXA-483	carbapenem;penicillin beta-lactam	teicoplanin	antibiotic inactivation
Serratia fonticola	FONA-4	penicillin beta-lactam	None	antibiotic inactivation
Enterobacter cloacae	FRI-3	penicillin beta-lactam	None	antibiotic inactivation
Francisella tularensis subsp. Tularensis NE061598	STU1	penicillin beta-lactam	None	antibiotic inactivation

Elizabethkingia meningoseptica	QCBa10	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella sp. P1CD1	LEN-51	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	NDM-28	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-190	cephalosporin	None	antibiotic inactivation
Mycobacterium smegmatis	MyH37Rv	peptide antibiotic	None	antibiotic target alteration
Mycobacterium smegmatis	MyH37Rv	peptide antibiotic	None	antibiotic target alteration
Mycobacterium tuberculosis	MyH37Rv	peptide antibiotic	None	antibiotic target alteration
Klebsiella pneumoniae	MCR-3.4	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-4.4	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Klebsiella pneumoniae	OXA-403	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-262	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter sp. NIPH 1897A	OXA-297	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-403	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Streptomyces lividans	mgtA	macrolide antibiotic	erythromycin;tylosin;azithromycin	antibiotic target alteration
Acinetobacter baumannii	ADC-158	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-160	cephalosporin	None	antibiotic inactivation
Escherichia coli	MCR-4.5	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Acinetobacter radioresistens	OXA-300	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-263	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter sp. NIPH 3623A	OXA-298	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	Pseudomonas aeruginosa	carbamazepine;fluoroquinolone;erythromycin;azithromycin;clarithromycin;clindamycin;clotrimazole;colistin A;colistin B	erythromycin;tylosin;azithromycin	antibiotic target alteration
Acinetobacter baumannii	OXA-404	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-446	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-484	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Serratia fonticola	FONA-5	penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	QCBa11	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella variicola	LEN-55	penicillin beta-lactam	None	antibiotic inactivation
Mycobacterium tuberculosis	MyH37Rv	peptide antibiotic	None	antibiotic target alteration

uncultured bacterium	tetB(60)	tetracycline antibiotic	tetracycline	antibiotic efflux
Streptococcus australis	tetA(46)	tetracycline antibiotic	tetracycline	antibiotic efflux
Streptococcus australis	tetB(46)	tetracycline antibiotic	tetracycline	antibiotic efflux
uncultured bacterium	tetA(60)	tetracycline antibiotic	tetracycline	antibiotic efflux
Escherichia coli	floR	phenicol antibiotic	chloramphenicol;florfenicol	antibiotic efflux
Pseudomonas aeruginosa	OXA-1	macrolide antibiotic;monobactam;tetracycline	erythromycin;clarithromycin;tetracycline	antibiotic efflux
Escherichia coli	MCR-5.2	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Serratia fonticola	SFH-1	carbapenem	None	antibiotic inactivation
Acinetobacter baumannii	adeL	fluoroquinolone antibiotic	tetracycline antibiotic	antibiotic efflux
Pseudomonas aeruginosa	PAO1	aminoglycoside antibiotic	gentamicin C;gentamicin	antibiotic efflux
Escherichia coli	Escherichia coli emrE	macrolide antibiotic	erythromycin	antibiotic efflux
Acinetobacter baumannii	OXA-122	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	Klebsiella pneumoniae acrA	fluoroquinolone antibiotic;tigebactam;ceftazidime;ceftiofur;ceftazidime;ceftiofur	erythromycin;clarithromycin;tetracycline	antibiotic efflux
Enterobacter cloacae	Enterobacter cloacae acrA	fluoroquinolone antibiotic;tigebactam;ceftazidime;ceftiofur;ceftazidime;ceftiofur	erythromycin;clarithromycin;tetracycline	antibiotic efflux
Escherichia coli str. K-12	Escherichia coli 655 acrA	fluoroquinolone antibiotic;tigebactam;ceftazidime;ceftiofur;ceftazidime;ceftiofur	erythromycin;clarithromycin;tetracycline	antibiotic efflux
Acinetobacter haemolyticus	OXA-264.3 = MTCC 9819	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter bouvetii DSM 4204	OXA-264 = CIP 107468	penicillin beta-lactam	oxacillin	antibiotic inactivation
Serratia marcescens	OXA-405	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-447	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-485	penicillin beta-lactam	oxacillin	antibiotic inactivation
Serratia fonticola	FONA-6	penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	QOB-12	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella variicola	LEN-58	penicillin beta-lactam	None	antibiotic inactivation
Streptococcus pneumoniae	Streptococcus pneumoniae PB23	penicillin beta-lactam	oxacillin	antibiotic target alteration
Acinetobacter baumannii	ADC-191	cephalosporin	None	antibiotic inactivation
Mycobacterium tuberculosis	H37Rv	pyrazinamide	pyrazinamide	antibiotic target alteration
Pseudomonas aeruginosa	bcr-1	bicyclomycin-like antibiotic	bicyclomycin	antibiotic efflux

None	MexEF-OprN with MexS	fluoroquinolone antibiotic resistance	clonoxolone; ciprofloxacin; ofloxacin	antibiotic target alteration
Acinetobacter pittii	ADC-18	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PAO1	None	None	antibiotic efflux
Pseudomonas aeruginosa	PAO1	None	None	antibiotic target alteration
Acinetobacter baumannii	OXA-123	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Bacillus cereus Rock3-29	mphL	macrolide antibiotic	erythromycin; clarithromycin; azithromycin	antibiotic inactivation
Pseudomonas aeruginosa	PAO1	None	None	antibiotic efflux
Acinetobacter haemolyticus	OXA-265	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Staphylococcus aureus	Staphylococcus aureus 236	SSA-RNA dependent antibiotic; tetracycline	chloramphenicol; streptomycin; rifampin; fusidic acid	antibiotic target alteration
Pseudomonas aeruginosa	PAO1 NfxB	macrolide antibiotic; fluoroquinolone antibiotic	erythromycin; tetracycline; cephazolin; ceftazidime; ceftiofur	antibiotic efflux
Acinetobacter bereziniae	OXA-300	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	PAO1 NfxB	macrolide antibiotic; fluoroquinolone antibiotic	erythromycin; tetracycline; cephazolin; ceftazidime; ceftiofur	antibiotic efflux
Acinetobacter baumannii	OXA-406	carbapenem; penicillin beta-lactam	texacillin	antibiotic inactivation
Brevibacillus brevis	EdeQ	peptide antibiotic; polymyxin B	edeine A; edeine B; edeine C; edeine D; edeine E	antibiotic inactivation
Campylobacter jejuni	OXA-448	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-486	penicillin beta-lactam	oxacillin	antibiotic inactivation
Elizabethkingia meningoseptica	OXA-13	carbapenem; cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PAO1	fluoroquinolone antibiotic; trimethoprim; rifampin	trimethoprim; rifampin; ciprofloxacin; ofloxacin	antibiotic target alteration
None	MexEF-OprN with MvaT	fluoroquinolone antibiotic resistance	clonoxolone; ciprofloxacin; ofloxacin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 655	nfsA mutation conferring resistance	nitrofurantoin	antibiotic target alteration
Geobacillus stearothermophilus	phlS	tetracycline antibiotic	tetracycline	antibiotic efflux
Pseudomonas aeruginosa	basS	peptide antibiotic	polymyxin B	antibiotic target alteration
Chlamydia trachomatis	Chlamydia trachomatis in phage	phosphonate antibiotic resistance	fosfomycin	antibiotic target alteration
Enterococcus faecium DC	Enterococcus faecium EF	Trimethoprim antibiotic resistance	GE2270A	antibiotic target alteration
Pseudomonas aeruginosa	PAO1	fluoroquinolone antibiotic; diamfloxacin	clonoxolone; ciprofloxacin; ofloxacin	antibiotic target alteration
Mycobacterium leprae	Mycobacterium leprae rpoB	amphotericin B conferring resistance	itraconazole; voriconazole; posaconazole	antibiotic target alteration
Pseudomonas aeruginosa	PAO1	macrolide antibiotic; fluoroquinolone antibiotic	erythromycin; tetracycline; cephazolin; ceftazidime; ceftiofur	antibiotic efflux

None	MexCD-OprJ with type B MexCD-OprJ	macrolide antibiotic;fluoroquinolone	gentamicin	glyoxalase II;phosphotransferase
Acinetobacter baumannii	BRP(MBL)	glycopeptide antibiotic	bleomycin;bleomycinic acid	bleomycin A2;bleomycin
Acinetobacter gyllenbergii	ANP-3'230	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
None	MexXY-OprA	macrolide antibiotic;fluoroquinolone	amikacin;gatifloxacin	glyoxalase II;phosphotransferase
Acinetobacter pittii	ADC-19	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-20	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae complex	ADC-44	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Acinetobacter pittii	ADC-21	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-22	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-23	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	MPA-B1	macrolide antibiotic;monobactam	tetracycline	antibiotic efflux
Acinetobacter baumannii	OXA-124	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter venetianus	OXA-266 CIP 110063	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	MPA-O1	macrolide antibiotic;monobactam	tetracycline	antibiotic efflux
Acinetobacter bereziniae	OXA-3003 = CIP 70.12	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-407	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-449	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-453	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-488	penicillin beta-lactam	oxacillin	antibiotic inactivation
Staphylococcus arlettae	ARL-1	penicillin beta-lactam	None	antibiotic inactivation
None	MuxABC-OpmB	macrolide antibiotic;monobactam	tetracycline	antibiotic efflux
Alkalihalobacillus clausii	BCL-1	penicillin beta-lactam	None	antibiotic inactivation
Moraxella catarrhalis	BRO-1	penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	EBM-14	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	MIR-23	monobactam;cephalosporin	None	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid	isoniazid	antibiotic target alteration
None	MexJK-OprM	macrolide antibiotic;tetracycline	tetracycline	antibiotic efflux

None	MexJK-OpmH	disinfecting agents and antiseptics	trimethoprim	antibiotic efflux
None	MexVW-OprM	macrolide antibiotic;fluoroquinolone antibiotic;aminoglycoside antibiotic;phenicol antibiotic	erythromycin;clarithromycin;chloramphenicol;thiamphenicol	antibiotic efflux
None	TriABC-OpmH	disinfecting agents and antiseptics	trimethoprim	antibiotic efflux
Pseudomonas aeruginosa PAO1	PRP1	fluoroquinolone antibiotic;aminoglycoside antibiotic	ciprofloxacin;amikacin	antibiotic efflux and antibiotic inactivation
None	AcrAB-ToIC	fluoroquinolone antibiotic;tetracycline antibiotic	ciprofloxacin;tetracycline	antibiotic efflux
Acinetobacter rudis CIP 114035	AP305'-VIIIb	aminoglycoside antibiotic	amikacin;kanamycin A	antibiotic inactivation
None	oqxAB	fluoroquinolone antibiotic;tetracycline antibiotic	ciprofloxacin;tetracycline	antibiotic efflux
Enterococcus faecalis	InuG	lincosamide antibiotic	lincomycin	antibiotic inactivation
Acinetobacter baumannii ATCC 19606 = CIP 70.34 and CIP 6441	ANT(3')-Ib	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Acinetobacter sp. NIPH 750	NT(3')-IIb	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Escherichia coli	NDM-17	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-25	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	OXA-125	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Legionella pneumophila strain Paris	Str-PA	macrolide antibiotic	erythromycin;spiramycin	antibiotic efflux
Legionella pneumophila strain Paris	Str-PA	macrolide antibiotic	erythromycin;spiramycin	antibiotic efflux
None	MexGHI-OpmD	fluoroquinolone antibiotic;tetracycline antibiotic	ciprofloxacin;tetracycline	antibiotic efflux
None	MexPQ-OpmE	macrolide antibiotic;carbapenem;cephalosporin	erythromycin;ceftazidime	antibiotic efflux
Citrobacter freundii	CFE-2	cephalosporin	None	antibiotic inactivation
None	MexMN-OprM	phenicol antibiotic	chloramphenicol;thiamphenicol	antibiotic efflux
None	MdtABC-ToIC	aminocoumarin antibiotic	novobiocin	antibiotic efflux
None	EmrAB-ToIC	fluoroquinolone antibiotic	nalidixic acid	antibiotic efflux
None	EmrKY-ToIC	tetracycline antibiotic	tetracycline	antibiotic efflux
Acinetobacter calcoaceticus OXANB 3680	OXA-23	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
None	MdtEF-ToIC	macrolide antibiotic;fluoroquinolone antibiotic	erythromycin;ciprofloxacin	antibiotic efflux
Pseudomonas aeruginosa PDC-79	PDC-79	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa PDC-80	PDC-80	monobactam;carbapenem	None	antibiotic inactivation
None	MdtNOP	nucleoside antibiotic;disinfecting agents and antiseptics	kanamycin	antibiotic efflux

Streptoalloteichus tenebrarius	transB	aminoglycoside antibiotic	neomycin;apramycin;kanamycin	antibiotic target alteration
Escherichia coli	QepA2	fluoroquinolone antibiotic	ciprofloxacin;moxifloxacin	antibiotic efflux
Acinetobacter sp. CIP 64	OXA-302	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Achromobacter sp. salbro	TMB-1	carbapenem;cephalosporin	ceftazidime	antibiotic inactivation
Acinetobacter courvalinii	TMB-2	carbapenem;cephalosporin	ceftazidime	antibiotic inactivation
Pseudomonas aeruginosa PAO1	Pseudomonas aeruginosa PAO1	fluoroquinolone antibiotic; tetracycline; ciprofloxacin; levofloxacin; tigecycline	tegacycline	antibiotic target alteration
Acinetobacter baumannii	OXA-408	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Escherichia coli	FosA6	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Salmonella enterica subspecies I serovar Heidelberg	FosA7	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Moraxella catarrhalis	Moraxella catarrhalis M35	monobactam;carbapenem	meropenem;penicillin beta-lactam	reduced permeability to antibiotics
Escherichia coli	porin OmpC	monobactam;carbapenem	ceftazidime;penicillin beta-lactam	reduced permeability to antibiotics
Vibrio cholerae	Vibrio cholerae OmpU	peptide antibiotic	BPI	reduced permeability to antibiotics
Campylobacter coli	OXA-450	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter insuavis	OXA-455	penicillin beta-lactam	oxacillin	antibiotic inactivation
Escherichia coli O157:H7	Escherichia coli LamB	fluoroquinolone antibiotic; tetracycline; chloramphenicol; trimethoprim-sulfamethoxazole	trimethoprim-sulfamethoxazole	antibiotic target alteration
Acinetobacter baumannii	ADC-192	cephalosporin	None	antibiotic inactivation
None	AcrEF-ToIC confers resistance to	fluoroquinolone antibiotic; ciprofloxacin; levofloxacin	ceftazidime;penicillin beta-lactam	antibiotic efflux
Burkholderia pseudomallei	Burkholderia pseudomallei Omp38	monobactam;carbapenem	ceftazidime;penicillin beta-lactam	reduced permeability to antibiotics
Vibrio cholerae	Vibrio cholerae OmpT	peptide antibiotic	BPI	reduced permeability to antibiotics
Staphylococcus arlettae	ARL-2	penicillin beta-lactam	None	antibiotic inactivation
Bacillus atrophaeus C89	BAT-1	cephalosporin	None	antibiotic inactivation
Serratia marcescens	BES-1	penicillin beta-lactam	None	antibiotic inactivation
Moraxella catarrhalis ATCC 3617	CBR-3617	penicillin beta-lactam	None	antibiotic inactivation
Serratia sp. FS14	Serratia marcescens OmpF	fluoroquinolone antibiotic; rifampin; ciprofloxacin; levofloxacin; tigecycline	tegacycline	antibiotic target alteration
Mycoplasma gallisepticum Myco (B)sw	Mycoplasma gallisepticum Myco (B)sw	23S rRNA mutation	pleuroquinolone resistance	antibiotic target alteration
Streptococcus oralis	Streptococcus mitis CdsA	peptide antibiotic conferring	daptomycin resistance	antibiotic target alteration
Brachyspira hyodysenteriae	Brachyspira hyodysenteriae	aez25S rRNA mutation	lysine	antibiotic target alteration

Moraxella catarrhalis BB116	Moraxella catarrhalis 23S rRNA	macrolide antibiotic	erythromycin	antibiotic target alteration
Helicobacter pylori	Helicobacter pylori 23S rRNA	macrolide antibiotic	clarithromycin	antibiotic target alteration
Achromobacter insuavis	AXY-Z	macrolide antibiotic;fluoroquinolone	erythromycin;ceftriaxone	antibiotic;cephalosporin
Achromobacter insuavis	AXY-X	macrolide antibiotic;fluoroquinolone	erythromycin;ceftriaxone	antibiotic;cephalosporin
Achromobacter insuavis	AXY-Z	macrolide antibiotic;fluoroquinolone	erythromycin;ceftriaxone	antibiotic;cephalosporin
Achromobacter insuavis	AXY-A	macrolide antibiotic;fluoroquinolone	erythromycin;ceftriaxone	antibiotic;cephalosporin
Clostridium botulinum A strain ATCC 3502		lincosamide antibiotic;streptogramin	clindamycin	antibiotic target alteration
Pseudomonas aeruginosa PDC-81		monobactam;carbapenem	cefepime	antibiotic inactivation
Acinetobacter baumannii ADC-107		cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii ADC-109		cephalosporin	None	antibiotic inactivation
Escherichia coli CFT073	Escherichia coli 23S rRNA	macrolide antibiotic	clindamycin	antibiotic target alteration
Escherichia coli CFT073	Escherichia coli 23S rRNA	macrolide antibiotic	clarithromycin	antibiotic target alteration
Propionibacterium freudenreichii	Propionibacteria 23S rRNA	macrolide antibiotic	erythromycin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	macrolide antibiotic	erythromycin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	macrolide antibiotic	erythromycin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	macrolide antibiotic	erythromycin	antibiotic target alteration
Mycobacterium smegmatis	Mycobacterium smegmatis 23S rRNA	macrolide antibiotic	erythromycin	antibiotic target alteration
Mycobacterium avium	Mycobacterium avium 23S rRNA	macrolide antibiotic	erythromycin	antibiotic target alteration
Mycobacterium intracellulare	Mycobacterium intracellulare 23S rRNA	macrolide antibiotic	erythromycin	antibiotic target alteration
Mycobacterium intracellulare	Mycobacterium intracellulare 23S rRNA	macrolide antibiotic	erythromycin	antibiotic target alteration
Mycobacterium kansasii	Mycobacterium kansasii 23S rRNA	macrolide antibiotic	erythromycin	antibiotic target alteration
Bacteria, Viruses, Fungi, and Other	genome sequence	antibiotic	None	antibiotic inactivation
Chlamydomonas reinhardtii	Chlamydomonas reinhardtii 23S rRNA	macrolide antibiotic	erythromycin	antibiotic target alteration
Escherichia coli CFT073	Escherichia coli 23S rRNA	macrolide antibiotic	erythromycin	antibiotic target alteration
Mycobacteroides abscessus	Mycobacteroides abscessus 23S rRNA	macrolide antibiotic	erythromycin	antibiotic target alteration
Streptococcus pneumoniae	Streptococcus pneumoniae 23S rRNA	macrolide antibiotic	erythromycin	antibiotic target alteration
Escherichia coli CFT073	Escherichia coli 23S rRNA	macrolide antibiotic	erythromycin	antibiotic target alteration
Chlamydia trachomatis	Chlamydia trachomatis 23S rRNA	macrolide antibiotic	erythromycin	antibiotic target alteration

Acinetobacter baumannii	OXA-126	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Mycoplasma pneumoniae	Mycoplasma pneumoniae 23S rRNA	antibiotic conferring resistance to erythromycin	erythromycin	antibiotic target alteration
Halobacterium salinarum	Halobacterium halobium 23S rRNA	antibiotic conferring resistance to chloramphenicol	chloramphenicol	antibiotic target alteration
Streptococcus pneumoniae	Streptococcus pneumoniae 23S rRNA	antibiotic conferring resistance to clindamycin	clindamycin	antibiotic target alteration
Mycobacterium tuberculosis	Mycobacterium tuberculosis 16S rRNA	antibiotic conferring resistance to isoniazid	isoniazid	antibiotic target alteration
Macrococcus caseolyticus	mecD	penicillin beta-lactam	methicillin	antibiotic target replacement
Escherichia coli	Escherichia coli mdfA	tetracycline antibiotic;phenol	tetracycline;disinfectant	antibiotic target alteration
Salmonella enterica subspecies enterica	Salmonella enterica typhimurium	phenicol antibiotic	chloramphenicol	antibiotic efflux
None	MexEF-OprN with MexT	fluoroquinolone antibiotic	ciprofloxacin	antibiotic efflux
Mycobacterium leprae	AAC(2')-Ie	aminoglycoside antibiotic	dibekacin;netilmicin;tobramycin	antibiotic target alteration
Mycobacterium tuberculosis	Mycobacterium tuberculosis 16S rRNA	antibiotic conferring resistance to ethambutol	ethambutol	antibiotic target alteration
None	PatA-PatB	fluoroquinolone antibiotic	ciprofloxacin;norfloxacin	antibiotic efflux
Bacillus anthracis	Bla2	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	PDC-82	monobactam;carbapenem	meropenem	antibiotic inactivation
Acinetobacter baumannii	ADC-110	cephalosporin	None	antibiotic inactivation
Campylobacter jejuni	APH(2'')-If	aminoglycoside antibiotic	dibekacin;sisomicin;kanamycin	antibiotic target alteration
Klebsiella pneumoniae	MCR-1.2	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Elizabethkingia meningoseptica	QCB18	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	NPS-1	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli CFT073	Escherichia coli 23S rRNA	phenicol antibiotic conferring resistance to chloramphenicol	chloramphenicol	antibiotic target alteration
Vibrio cholerae O1 biovar El Tor	Vibrio cholerae 16S rRNA	carbapenem	meropenem	antibiotic inactivation
Enterobacter cloacae	LAP-2	cephalosporin;penicillin beta-lactam	cefepime;cefuroxime;amoxicillin	antibiotic target alteration
Cereibacter sphaeroides	Cereibacter sphaeroides 23S rRNA	cephalosporin;penicillin beta-lactam	penicillin	antibiotic inactivation
Mycoplasma hominis	Mycoplasma hominis 23S rRNA	antibiotic conferring resistance to tetracycline	tetracycline	antibiotic target alteration
Nocardia farcinica IFM 10152	15B2	rifamycin antibiotic	rifampin;rifaximin;rifabutin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 655 ampC beta-lactamase	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Buttiauxella agrestis	BUT-1	cephalosporin	None	antibiotic inactivation

Acinetobacter pittii	ADC-13	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-14	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-15	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-17	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-16	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-41	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-42	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-43	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-44	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-56	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-61	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-74	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-75	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-76	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-77	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-78	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-79	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-81	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-162	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-165	cephalosporin	None	antibiotic inactivation
Escherichia coli str. K-12	Substr. MC4100 PtsI with phosphonate feeding antibiotic resistance	phosphonate;antibiotic	fosfomycin	antibiotic target alteration
Salmonella enterica subsp. enterica serovar Typhimurium	Substr. MC4100 with disinfecting agent	antibiotic	triclosan	antibiotic target alteration
Empedobacter falsenii	EBR-2	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	PDC-324	monobactam;carbapenem	cephalosporin	antibiotic inactivation
Escherichia coli str. K-12	Substr. MC4100 gyrA with disinfecting agent	antibiotic	triclosan	antibiotic target alteration
Pseudomonas aeruginosa	PDC-73	monobactam;carbapenem	cephalosporin	antibiotic inactivation
Pseudomonas aeruginosa	PDC-74	monobactam;carbapenem	cephalosporin	antibiotic inactivation

Pseudomonas aeruginosa	PDC-75	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-76	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-77	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-78	monobactam;carbapenem	None	antibiotic inactivation
Acinetobacter baumannii	ADC-112	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-83	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-84	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-85	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-86	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-87	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-88	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-89	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-90	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-91	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-92	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-93	monobactam;carbapenem	None	antibiotic inactivation
Brevibacillus brevis Vm4	catV	phenicol antibiotic	chloramphenicol	antibiotic inactivation
Acidaminococcus fermentans	A03-1	cephalosporin;penicillin	ceftriaxime;amoxicillin;cefazolin	antibiotic inactivation
uncultured bacterium	sul4	sulfonamide antibiotic	sulfamethoxazole	antibiotic target replacement
Acinetobacter calcoaceticus	ADC-194	cephalosporin	None	antibiotic inactivation
Enterobacter asburiae	OXA-436	carbapenem;penicillin	beta-lactam	antibiotic inactivation
Shewanella sp.	OXA-535	carbapenem;penicillin	beta-lactam	antibiotic inactivation
Vibrio cholerae O1 biovar El Tor str. N16961	hmc	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Acinetobacter baumannii	OXA-127	carbapenem;penicillin	beta-lactam	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-125B13	carbapenem;penicillin	beta-lactam	antibiotic inactivation
Escherichia coli	QepA4	fluoroquinolone antibiotic	ciprofloxacin;nalidixic acid	antibiotic efflux
uncultured bacterium IN-141	ttt(59)	tetracycline antibiotic	tetracycline;chlortetracycline;doxycycline	antibiotic efflux

uncultured bacterium IN-02	IN-02(W/N/W)	tetracycline antibiotic	tetracycline;minocycline;chloritetracycline	antibiotic target protection
Haemophilus influenzae Rd KW20	Haemophilus influenzae Rd KW20	beta-lactamase resistance	ceftriaxone;ceftazidime;cefepime;ceftiofur;cefotaxime;cefuroxime;cefepime	antibiotic target alteration
Acinetobacter calcoaceticus OXA-NC3811	OXA-NC3811	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Aeromonas enteropelogenes TEU-1	TEU-1	cephalosporin;penicillin beta-lactam	ceftriaxone	antibiotic inactivation
Elizabethkingia anophelis CUY-21	CUY-21	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Agrobacterium fabrum strain AG55	Agrobacterium fabrum strain AG55	phenylalanine acetyltransferase	chloramphenicol	antibiotic inactivation
Campylobacter coli	Campylobacter coli chloramphenicol acetyltransferase	phenylalanine acetyltransferase	chloramphenicol	antibiotic inactivation
Streptococcus suis	Streptococcus suis chloramphenicol acetyltransferase	phenylalanine acetyltransferase	chloramphenicol	antibiotic inactivation
Enterococcus faecium	Enterococcus faecium chloramphenicol acetyltransferase	phenylalanine acetyltransferase	chloramphenicol	antibiotic inactivation
Staphylococcus intermedius	Staphylococcus intermedius phenicol antibiotic	phenicol antibiotic	chloramphenicol	antibiotic inactivation
Enterococcus faecalis	Enterococcus faecalis chloramphenicol acetyltransferase	phenylalanine acetyltransferase	chloramphenicol	antibiotic inactivation
Vibrio anguillarum	Vibrio anguillarum chloramphenicol acetyltransferase	phenylalanine acetyltransferase	chloramphenicol	antibiotic inactivation
Pseudomonas aeruginosa PAO1	Pseudomonas aeruginosa PAO1	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic inactivation
Pseudomonas aeruginosa PDC-323	PDC-323	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Moraxella catarrhalis BC11CR-Mc	11CR-Mc	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Staphylococcus aureus	poxTA	tetracycline antibiotic;oxazolidinone antibiotic	telavancin;cefoxitin;phenoxymethylpenicillin	antibiotic target protection
Acinetobacter sp. ANC 300A-303	300A-303	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Acinetobacter baumannii OXA-409	OXA-409	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-451	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter sp. 20150224-457	OXA-457	penicillin beta-lactam	oxacillin	antibiotic inactivation
Staphylococcus arlettae	ARL-3	penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii ADC-113	ADC-113	cephalosporin	None	antibiotic inactivation
Pseudomonas fluorescens SIC-1	SIC-1	carbapenem	None	antibiotic inactivation
Clostridium botulinum	CBP-1	penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	QOBa15	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	H37Rv	sinisiglycosides and interferon gamma	kanamycin;Anamycin	antibiotic target alteration
Neisseria gonorrhoeae	Neisseria gonorrhoeae for sulfonamide antibiotic resistance	sulfonamide antibiotic resistance	sulfonamide	antibiotic target alteration

Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid;ethambutol;rifampin	resistance to ethionamide	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid;ethambutol;rifampin	resistance to isoniazid	antibiotic target alteration
Pandoraea pnomenusa	OXA-151	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter pittii ANC 4050	OXA-270	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter sp. NIPH 542	OXA-304	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-411	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Campylobacter jejuni	OXA-452	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter sp. 2015004	OXA-458	penicillin beta-lactam	oxacillin	antibiotic inactivation
Staphylococcus arlettae	ARL-4	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	BIL-1	cephalosporin	None	antibiotic inactivation
Chryseobacterium gleum	CGA-1	penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	EMB-16	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Pandoraea pnomenusa	OXA-152	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter lactucae	OXA-271	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter sp. NIPH 810	OXA-305	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-412	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Achromobacter insuavis	OXA-459	penicillin beta-lactam	oxacillin	antibiotic inactivation
Staphylococcus arlettae	ARL-5	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	BKC-1	carbapenem	None	antibiotic inactivation
Elizabethkingia meningoseptica	EMB-2	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	LAP-1	cephalosporin;penicillin beta-lactam	cefepime;cefuroxime;amoxicillin;penicillin	antibiotic inactivation
Pandoraea apista	OXA-153	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter pittii ATCC 35062	OXA-72CIP 70.29	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter sp. NIPH 2000	OXA-306	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-413	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Campylobacter jejuni	OXA-460	penicillin beta-lactam	oxacillin	antibiotic inactivation
Staphylococcus arlettae	ARL-6	penicillin beta-lactam	None	antibiotic inactivation

Acinetobacter baumannii	ADC-114	cephalosporin	None	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	sisapoyon antibiotic conferring resistance to rifabutin	rifampicin	antibiotic target alteration
Bacillus pumilus SAFR-032	BPU-1	penicillin beta-lactam	None	antibiotic inactivation
Chryseobacterium indologenes	Genes NBRC 14944	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia meningoseptica	QCBa3	carbapenem;cephalosporin	None	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid inhibition conferring resistance to isoniazid	isoniazid	antibiotic target alteration
Pandoraea sputorum	OXA-154	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter pittii ANC 3678	OXA-273	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-414	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Campylobacter jejuni	OXA-461	penicillin beta-lactam	oxacillin	antibiotic inactivation
Nocardia asteroides	AST-1	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Chryseobacterium indologenes	Genes	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia meningoseptica	QCBa4	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	IMI-8	carbapenem	None	antibiotic inactivation
Pandoraea sputorum	OXA-155	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter guillouiae	OXA-275	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter gernerii DSM 104387 = CIP 107464 = MTCC 19824	OXA-368	penicillin beta-lactam	oxacillin	antibiotic inactivation
Shewanella xiamenensis	OXA-416	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Aliarcobacter butzleri	OXA-464	penicillin beta-lactam	oxacillin	antibiotic inactivation
Chryseobacterium indologenes	Genes	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia meningoseptica	QCBa5	carbapenem;cephalosporin	None	antibiotic inactivation
Pandoraea pulmonicola	OXA-156	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter schindleri	OXA-206	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-336	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-430	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Brachybacterium faecium DSM 4810	DSM	macrolide antibiotic	azithromycin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-417	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation

Campylobacter jejuni	OXA-465	penicillin beta-lactam	oxacillin	antibiotic inactivation
Chryseobacterium indologenes	GM-4	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia meningoseptica	QCB-6	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Citrobacter freundii	CMY-135	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-115	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-163	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-164	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-258	monobactam;carbapenem	None;cephalosporin	antibiotic inactivation
Acinetobacter baumannii	ADC-116	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-136	cephalosporin	cefuroxime;cefotaxime;ceftriaxone	antibiotic inactivation
Klebsiella variicola	LEN-37	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella variicola	LEN-34	penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	ADC-117	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-231	monobactam;cephalosporin	cefepime;cefazidime;cefepidolam	antibiotic inactivation
Bacillus subtilis subsp. subtilis str. 168	brlR	lincosamide antibiotic;streptogramin antibiotic	clindamycin;erythromycin;streptomycin	antibiotic inactivation
Desulfovibrio desulfuricans	BES-1	penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter tandoii DSM 49064 = CIP 107469	OXA-464	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter rudis CIP 103065	OXA-665	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pandoraea norimbergensis	OXA-157	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter guillouiae MSF4-134	OXA-174	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter proteolyticus	OXA-286	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter schindleri CIP 107287	OXA-227	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-337	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella pneumoniae B2	DMC-663	cephalosporin;penicillin beta-lactam	cefazidime	antibiotic inactivation
Enterobacter cloacae	OXA-427	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Campylobacter jejuni	OXA-466	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pandoraea sp. Va8523	OXA-158	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation

Neisseria gonorrhoeae	Neisseria gonorrhoeae gyp-1	Blindolferin-like resistance	Zoliflodacin	antibiotic target alteration
Acinetobacter parvus DSM 10627	OXA-619= CIP 108168	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-339	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-429	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Brachyspira pilosicoli	OXA-470	penicillin beta-lactam	oxacillin	antibiotic inactivation
Citrobacter koseri	CKO-1	penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	QCBa7	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-49	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	LEN-25	penicillin beta-lactam	None	antibiotic inactivation
Porphyromonas gingivalis	ATCC 33277	peptide antibiotic	polymyxin B;polymyxin B1	polymyxin B2;polymyxin B3
Escherichia coli	SHV-4	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Neisseria gonorrhoeae	Neisseria gonorrhoeae PBP2a	Cephalosporin;penicillin beta-lactam	ceftriaxone;cefazolin	antibiotic target alteration
Aeromonas hydrophila	OXA-724	penicillin beta-lactam	oxacillin	antibiotic inactivation
Burkholderia dolosa AU015	Burkholderia dolosa gyrA	fluoroquinolones	ciprofloxacin	antibiotic target alteration
Escherichia coli	NDM-15	carbapenem;cephalosporin	None	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin;isoniazid	kanamycin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid	isoniazid	antibiotic target alteration
Campylobacter jejuni	OXA-185	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter johnsonii ATCC 3580	OXA-368	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-340	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Brachyspira pilosicoli	OXA-471	penicillin beta-lactam	oxacillin	antibiotic inactivation
Elizabethkingia meningoseptica	QMEa1	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CMY-132	cephalosporin	None	antibiotic inactivation
Elizabethkingia meningoseptica	QCBa8	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	IMP-52	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella variicola	LEN-35	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-19	carbapenem;cephalosporin	None	antibiotic inactivation

Bacillus subtilis subsp. subtilis	ATCC 6051	macrolide antibiotic	telithromycin;azithromycin	antibiotic inactivation
Klebsiella pneumoniae	Klebsiella pneumoniae OmpK35	monobactam;carbapenem	ceftriaxone;cefepime;meropenem	reduced permeability to antibiotics
Klebsiella pneumoniae	LEN-30	penicillin beta-lactam	None	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	sinergolide antibiotic	capreomycin	antibiotic target alteration
Acinetobacter baumannii	SCO-1	cephalosporin;penicillin beta-lactam	cefepime;ceftazidime;ceftriaxone	antibiotic inactivation
Klebsiella pneumoniae	TEM-232	monobactam;cephalosporin	cefepime;ceftriaxone	antibiotic inactivation
Neisseria meningitidis	Neisseria gonorrhoeae PBP2	cephalosporin;penicillin beta-lactam	Meropenem	antibiotic target alteration
Mycoplasma genitalium	Mycoplasma genitalium pfl	Fluoroquinolone antibiotic	Moxifloxacin	antibiotic target alteration
Neisseria gonorrhoeae	Neisseria gonorrhoeae 235	beta-lactamase inhibition conferring resistance	azithromycin	antibiotic target alteration
Neisseria gonorrhoeae NG-28	Neisseria gonorrhoeae mtrA	macrolide antibiotic	erythromycin;azithromycin	antibiotic efflux
Neisseria gonorrhoeae	Neisseria gonorrhoeae pCE	Cephalosporin;penicillin beta-lactam	ceftriaxone	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	sinergolide antibiotic	streptomycin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	sinergolide antibiotic	ethambutol	antibiotic target alteration
Acinetobacter baumannii	ADC-68	carbapenem	None	antibiotic inactivation
Acinetobacter baumannii	IMP-55	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	IMP-56	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Acinetobacter baumannii	OXA-234	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter johnsonii CP6428	OXA-231	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-341	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-431	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Brachyspira pilosicoli	OXA-472	penicillin beta-lactam	oxacillin	antibiotic inactivation
Enterobacter cloacae	CMH-1	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-133	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-24	monobactam;carbapenem	cephalosporin;penicillin beta-lactam	antibiotic inactivation
Elizabethkingia meningoseptica	QJBa9	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella variicola	LEN-36	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella variicola	LEN-32	penicillin beta-lactam	None	antibiotic inactivation

Escherichia coli	NDM-18	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin	resistance to cycloserine	resistance to cycloserine	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	rifampin	resistance to rifampin	resistance to rifampin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	rifampin	resistance to rifampin	resistance to rifampin	antibiotic target alteration
Shewanella sp. FDAARGOS 3242	OXA-324	carbapenem;penicillin beta-lactam	None	None	antibiotic inactivation
uncultured bacterium	OXA-282	carbapenem;penicillin beta-lactam	None	None	antibiotic inactivation
Acinetobacter baumannii	OXA-342	carbapenem;penicillin beta-lactam	None	None	antibiotic inactivation
Escherichia coli	dfrB4	diaminopyrimidine antibiotic	trimethoprim	trimethoprim	antibiotic target replacement
Acinetobacter baumannii	OXA-432	carbapenem;penicillin beta-lactam	None	None	antibiotic inactivation
Brachyspira pilosicoli	OXA-473	penicillin beta-lactam	oxacillin	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	PDC-438	monobactam;carbapenem	None	cephalosporin	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin	resistance to pyrazinamide	resistance to pyrazinamide	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid	resistance to ethionamide	resistance to ethionamide	antibiotic target alteration
Acinetobacter baumannii	OXA-259	carbapenem;penicillin beta-lactam	None	None	antibiotic inactivation
Acinetobacter sp. CIP A162	OXA-283	carbapenem;penicillin beta-lactam	None	None	antibiotic inactivation
Acinetobacter baumannii	OXA-343	carbapenem;penicillin beta-lactam	None	None	antibiotic inactivation
Acinetobacter baumannii	OXA-433	carbapenem;penicillin beta-lactam	None	None	antibiotic inactivation
Brachyspira pilosicoli	OXA-474	penicillin beta-lactam	oxacillin	oxacillin	antibiotic inactivation
Klebsiella variicola subsp. Enterobacter	LEP108	penicillin beta-lactam	None	None	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin	resistance to pyrazinamide	resistance to pyrazinamide	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid	resistance to isoniazid	resistance to isoniazid	antibiotic target alteration
Escherichia coli	MCR-3.11	peptide antibiotic	colistin A;colistin B	colistin A;colistin B	antibiotic target alteration
Moraxella sp. MSG47-C17	MCR-6.1	peptide antibiotic	colistin A;colistin B	colistin A;colistin B	antibiotic target alteration
Moraxella pluranimalium	MCR-2.2	peptide antibiotic	colistin A;colistin B	colistin A;colistin B	antibiotic target alteration
Aeromonas allosaccharophila	MCR-3.6	peptide antibiotic	colistin A;colistin B	colistin A;colistin B	antibiotic target alteration
Aeromonas caviae	MCR-3.10	peptide antibiotic	colistin A;colistin B	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-3.5	peptide antibiotic	colistin A;colistin B	colistin A;colistin B	antibiotic target alteration

Moraxella sp. MSG13-C03	MCR-1.10	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.9	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas hydrophila	MCR-3.9	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas hydrophila	MCR-3.8	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas media	MCR-3.7	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-3.2	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Salmonella enterica subsp. Enterica serovar Typhimurium	MCR-1.6	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.3	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.4	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Klebsiella pneumoniae	MCR-7.1	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	glycyltyrosine antibiotics	cycloserine	antibiotic target alteration
Acinetobacter baumannii OXA-166	OXA-166	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Acinetobacter sp. CIP 51.0	OXA-284	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-344	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-437	carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Brachyspira pilosicoli	OXA-475	penicillin beta-lactam	oxacillin	antibiotic inactivation
Morganella morganii	DHA-9	cephalosporin	None	antibiotic inactivation
Klebsiella variicola subsp. Enterobacteriaceae	LEP-39	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-21	carbapenem;cephalosporin	None	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid-like antibiotic	isoniazid	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	polyamine antibiotic	ethambutol	antibiotic target alteration
uncultured bacterium	mphE	macrolide antibiotic	erythromycin	antibiotic inactivation
Pseudomonas aeruginosa	PDC-284	monobactam;carbapenem	None	antibiotic inactivation
Exiguobacterium sp. S3-2	mphN	macrolide antibiotic	erythromycin	antibiotic inactivation
Brachybacterium paraconglomeratum	mphO	macrolide antibiotic	erythromycin	antibiotic inactivation
Brevibacillus brevis Vm4	mphJ	macrolide antibiotic	erythromycin;telithromycin	antibiotic inactivation
Campylobacter jejuni subsp. Campylobacter	Campylobacter jejuni 23S	macrolide antibiotic	erythromycin	antibiotic target alteration

Escherichia coli	dfrA9	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Acinetobacter baumannii	ADC-119	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-165	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-34	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Escherichia coli	TEM-233	monobactam;cephalosporin	cefepime;ceftriaxone;cefazidime;beta-lactam	antibiotic inactivation
uncultured bacterium	tet(49)	tetracycline antibiotic	tetracycline;oxytetracycline	antibiotic inactivation
Acinetobacter baumannii	ADC-195	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	dfrB5	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Acinetobacter baumannii	ADC-166	cephalosporin	None	antibiotic inactivation
uncultured bacterium	tet(52)	tetracycline antibiotic	tetracycline;oxytetracycline	antibiotic inactivation
Streptomyces fradiae	erm(32)	macrolide antibiotic;lincosamide antibiotic	erythromycin;clindamycin;streptogramin antibiotic	antibiotic target alteration
Acinetobacter baumannii	ADC-196	cephalosporin	None	antibiotic inactivation
Escherichia coli	NDM-11	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Vibrio cholerae	dfrA6	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Klebsiella variicola subsp. Enterocoli	LEP149	penicillin beta-lactam	None	antibiotic inactivation
Vibrio cholerae non-O1/non-O139	dfrA2739	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Aeromonas hydrophila	dfrA28	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Klebsiella sp. MB45	dfrA30	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Escherichia coli	dfrA29	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Salmonella enterica	dfrA32	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Aeromonas hydrophila	dfrB7	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Clostridium acetobutylicum ATCC 25761	CLA300-824	Glycopeptide antibiotic	glycopeptide antibiotic	antibiotic target alteration
Clostridium difficile murine	CLA300-824	Glycopeptide antibiotic	glycopeptide antibiotic	antibiotic target alteration
Pseudomonas aeruginosa	CAM-1	carbapenem;cephalosporin	cefepime;ceftriaxone;cefazidime;beta-lactam	antibiotic inactivation
Vibrio cholerae MO10	dfrA18	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Moraxella osloensis	ICR-Mo	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
uncultured bacterium	PNGM-1	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Acinetobacter baumannii ATCC 29246	ADC-17578	phosphonic acid antibiotic	fosfomycin	antibiotic efflux

Acinetobacter baumannii AB057	Acinetobacter baumannii AB057	AbaQ	quinolone antibiotic	levofloxacin;nadixic acid	antibiotic efflux
Acinetobacter baumannii	Acinetobacter baumannii	AnaA	olid antibiotic;disinfecting agents;antiflaviseptics		antibiotic efflux
Acinetobacter baumannii	Acinetobacter baumannii	AbuO	glycoside antibiotic;antibapentige;cephalosporins;cyclic efflux;politic;drift		
Klebsiella pneumoniae subsp. pneumoniae NCTC 10644	Klebsiella pneumoniae NCTC 10644	K2B44	olid antibiotic;aminoglycoside;antistreptococcal;antibiotic;telavacycline		
uncultured bacterium	tet(48)		tetracycline antibiotic	tetracycline;oxytetracycline	antibiotic inactivation
Klebsiella pneumoniae subsp. pneumoniae NCTC 10644	Klebsiella pneumoniae NCTC 10644	K2B44	olid antibiotic;aminoglycoside;antistreptococcal;antibiotic;telavacycline		
uncultured bacterium	tet(50)		tetracycline antibiotic	tetracycline;oxytetracycline	antibiotic inactivation
uncultured bacterium	tet(51)		tetracycline antibiotic	tetracycline;oxytetracycline	antibiotic inactivation
uncultured bacterium	tet(53)		tetracycline antibiotic	tetracycline;minocycline;oxytetracycline	antibiotic inactivation
Staphylococcus xylosus	Erm(48)		macrolide antibiotic;lincosamide;antibiotic;streptogramin;antibiotic;antibiotic		
uncultured bacterium	tet(54)		tetracycline antibiotic	tetracycline;oxytetracycline	antibiotic inactivation
uncultured bacterium	tet(55)		tetracycline antibiotic	tetracycline;minocycline;oxytetracycline	antibiotic inactivation
Escherichia coli	TEM-227		monobactam;cephalosporin;cefepime;antibiotic		antibiotic inactivation
Enterobacter cloacae complex	NDT-39		carbapenem;cephalosporin;penicillin beta-lactam		antibiotic inactivation
Rhodococcus hoagii	erm(46)		macrolide antibiotic;lincosamide;antibiotic;streptogramin;antibiotic;antibiotic		
Klebsiella sp. 4_1_44FAA	Klebsiella pneumoniae Kpn6	Kpn6	macrolide antibiotic;fluoroquinolone;antibiotic;antibiotic;antibiotic		
Escherichia coli KTE14	Klebsiella pneumoniae Kpn6	Kpn6	macrolide antibiotic;fluoroquinolone;antibiotic;antibiotic;antibiotic		
Clostridioides difficile	clcD		lincosamide antibiotic;streptogramin;antibiotic;antibiotic;antibiotic		
Acinetobacter sp. CIP 64	OXA-285		carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-345		carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Escherichia coli	OXA-438		carbapenem;penicillin beta-lactam	taxacillin	antibiotic inactivation
Brachyspira pilosicoli	OXA-476		penicillin beta-lactam	oxacillin	antibiotic inactivation
Erwinia persicina	ERP-1		penicillin beta-lactam	None	antibiotic inactivation
Enterobacter cloacae	NDM-22		carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	gyrase	antibiotic confer resistance to pyrazinamide		antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoH	antibiotic confer resistance to isoniazid		antibiotic target alteration
Providencia sp. Y14	tet(57)		tetracycline antibiotic	tetracycline	antibiotic efflux

Bacteria, Viruses, Fungi, and other genome sequences associated with antibiotic resistance	Other	monobactam;cephalosporin;penicillin beta-lactam	cephalosporin;penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	qacE	disinfecting agents and antibiotics	None	antibiotic efflux
Pseudomonas aeruginosa	qacEdelta1	disinfecting agents and antibiotics	None	antibiotic efflux
sediment metagenome	IDC-1	carbapenem;cephalosporin	None	antibiotic inactivation
sediment metagenome	IDC-2	carbapenem;cephalosporin	None	antibiotic inactivation
Vibrio alginolyticus	VMB-1	carbapenem;cephalosporin;penicillin beta-lactam	cephalosporin;penicillin beta-lactam	antibiotic inactivation
Alcaligenes faecalis	APH(3')-VIb	aminoglycoside antibiotic	neomycin;amikacin;ribosamides	antibiotic inactivation
Citrobacter freundii	CMY-150	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	LMB-1	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	IMP-68	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Escherichia coli	FosL1	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Enterococcus faecium	cfr(D)	lincosamide antibiotic;streptogramin antibiotic	clindamycin;streptogramin antibiotic	antibiotic inactivation
Enterobacter asburiae	FRI-4	penicillin beta-lactam	None	antibiotic inactivation
Enterobacter cloacae complex	FRI-5	penicillin beta-lactam	None	antibiotic inactivation
Enterobacter cloacae	FRI-6	penicillin beta-lactam	None	antibiotic inactivation
Enterobacter asburiae	FRI-7	penicillin beta-lactam	None	antibiotic inactivation
Enterobacter sp. 18A13	FRI-8	penicillin beta-lactam	None	antibiotic inactivation
Enterobacter asburiae	FRI-9	penicillin beta-lactam	None	antibiotic inactivation
Enterobacter cloacae	FLC-1	penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CTX-M-161	cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	CTX-M-162	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-163	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	CTX-M-164	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-165	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-166	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-159	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-65	monobactam;carbapenem	cephalosporin	antibiotic inactivation

Pseudomonas aeruginosa	PDC-55	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	YajC	fluoroquinolone antibiotic;cephalosporin;glycolic;terapibiotic	cephalosporin;glycolic;terapibiotic	antibiotic inactivation
Acinetobacter baumannii	ADC-197	cephalosporin	None	antibiotic inactivation
Salmonella enterica subsp. enterica serovar Emek	pmrA	phenicol antibiotic	chloramphenicol	antibiotic efflux
Klebsiella pneumoniae	OmpA	peptide antibiotic	polymyxin B;defensin	reduced permeability to a
Bacillus anthracis str. Ames	SatA	nucleoside antibiotic	streptothricin	antibiotic inactivation
Escherichia coli	BLMT	glycopeptide antibiotic	bleomycin	antibiotic inactivation
Staphylococcus aureus subsp. aureus MRSA251	MecC type 1	penicillin beta-lactam	methicillin	antibiotic target replacem
Klebsiella pneumoniae subsp. rhinoscleromatis SB3482	lppB	peptide antibiotic	polymyxin B;colistin A;colistin B	antibiotic target alteration
Moraxella pluranimalium	ROB-3	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae subsp. pneumoniae Ecl8	OspB	aminoglycoside antibiotic	tobramycin;gentamicin	antibiotic efflux
Acinetobacter baumannii	LpsB	peptide antibiotic	colistin A;colistin B;defensin	reduced permeability to a
Haemophilus influenzae	LpsA	peptide antibiotic	polymyxin B;defensin	reduced permeability to a
Klebsiella pneumoniae	ArnT	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	mlaD	oxazolidinone antibiotic;glycopeptide antibiotic	glycopeptide antibiotic	antibiotic efflux
Escherichia coli	mlaF	oxazolidinone antibiotic;glycopeptide antibiotic	glycopeptide antibiotic	antibiotic efflux
Klebsiella pneumoniae subsp. pneumoniae KPNH12	lppD	carbapenem;peptide antibiotic;clavulanic acid;amphotericin B	carbapenem;clavulanic acid;amphotericin B	antibiotic efflux
Cupriavidus gilardii	OXA-837	penicillin beta-lactam	oxacillin	antibiotic inactivation
Cupriavidus gilardii	AAC(3)-IVb	aminoglycoside antibiotic	tobramycin;gentamicin A	antibiotic inactivation
Cupriavidus gilardii	ANT(3'')-Ib	aminoglycoside antibiotic	spectinomycin;streptomycin	antibiotic inactivation
Pseudomonas aeruginosa	PR01	peptide antibiotic	polymyxin B;colistin A;colistin B	antibiotic target alteration
Pseudomonas aeruginosa	PR01	peptide antibiotic	polymyxin B;colistin A;colistin B	antibiotic target alteration
Pseudomonas aeruginosa	PR01	macrolide antibiotic;fluoroquinolone antibiotic;amikacin;gebutacin;Ofloxacillin;g	macrolide antibiotic;fluoroquinolone antibiotic;amikacin;gebutacin;Ofloxacillin;g	antibiotic inactivation
Pseudomonas aeruginosa	PR01	macrolide antibiotic;fluoroquinolone antibiotic;amikacin;gebutacin;Ofloxacillin;g	macrolide antibiotic;fluoroquinolone antibiotic;amikacin;gebutacin;Ofloxacillin;g	antibiotic inactivation
Pseudomonas aeruginosa	asmA	fluoroquinolone antibiotic;thiamopyrimidine antibiotic	thiamopyrimidine antibiotic	antibiotic efflux
Moraxella porci DSM 25326	ROB-4	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Moraxella sp. RCAD0137	ROB-5	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation

uncultured bacterium	ROB-6	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
uncultured bacterium	ROB-7	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
uncultured bacterium	ROB-8	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Glaesserella parasuis	ROB-10	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Thermus thermophilus H327	Thermus thermophilus UL327	pleuromutilin conferring resistance to pleuromutilin antibiotics	None	antibiotic target alteration
Thermus thermophilus H327	Thermus thermophilus 23S rRNA	pleuromutilin conferring resistance to pleuromutilin antibiotics	None	antibiotic target alteration
Vibrio cholerae O1	dfrA31	diaminopyrimidine antibiotic trimethoprim	trimethoprim	antibiotic target replacement
Enterobacter cloacae	AAC(3)-IIg	aminoglycoside antibiotic dibekacin;sisomicin;netilmicin	dibekacin;sisomicin;netilmicin	antibiotic inactivation
Acinetobacter pittii	tet(X5)	tetracycline antibiotic	tetracycline;minocycline;oxytetracycline	antibiotic inactivation
Mannheimia haemolytica	ROB-2	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Macrococcus canis	msrF	macrolide antibiotic;streptogramin antibiotic	erythromycin	antibiotic target protection
Macrococcus canis	msrH	macrolide antibiotic;streptogramin antibiotic	erythromycin	antibiotic target protection
Macrococcus canis	mef(D)	macrolide antibiotic	erythromycin	antibiotic efflux
Riemerella anatipestifer RA-6B	RA-6B	aminoglycoside antibiotic	None	antibiotic efflux
Riemerella anatipestifer RA-6A	RA-6A	aminoglycoside antibiotic	None	antibiotic efflux
Ralstonia pickettii	OXA-899	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Ralstonia pickettii	OXA-898	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Pseudomonas aeruginosa	GPC-1	carbapenem	None	antibiotic inactivation
Staphylococcus aureus	mecC-type BlaZ	penicillin beta-lactam	None	antibiotic inactivation
Staphylococcus saprophyticus	qacH	disinfecting agents and antiseptics	None	antibiotic efflux
Vibrio cholerae	qacL	disinfecting agents and antiseptics	None	antibiotic efflux
Streptococcus pyogenes	23S rRNA (adenine(2058) modification)	macrolide antibiotic;streptogramin antibiotic	erythromycin	antibiotic target alteration
Bacillus anthracis str. Ames	EsoB2	phosphonic acid antibiotic fosfomycin	fosfomycin	antibiotic inactivation
Pseudomonas aeruginosa	PDC-63	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-57	monobactam;carbapenem	None	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid conferring resistance to prothionamide	None	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid conferring resistance to isoniazid	None	antibiotic target alteration

Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin	prothionamide	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin	prothionamide	antibiotic target alteration
Mycobacterium smegmatis	SMC2 155	cephalosporin;penicillin beta-lactam	ceftriaxone;carbenicillin;oxacillin;ceftiofur;ceftazidime	antibiotic target alteration
Aeromonas media	AAC(6')-Ib-cr3	fluoroquinolone antibiotic	amikacin;glycoside;oxazolidinone	antibiotic target alteration
Enterobacter hormaechei	AAC(6')-Ib-cr4	fluoroquinolone antibiotic	amikacin;glycoside;oxazolidinone	antibiotic target alteration
Pseudomonas aeruginosa	AAC(6')-Ib-cr5	fluoroquinolone antibiotic	amikacin;glycoside;oxazolidinone	antibiotic target alteration
Escherichia coli	AAC(6')-Ib-cr6	fluoroquinolone antibiotic	amikacin;glycoside;oxazolidinone	antibiotic target alteration
Klebsiella pneumoniae	AAC(6')-Ib-cr7	fluoroquinolone antibiotic	amikacin;glycoside;oxazolidinone	antibiotic target alteration
Salmonella enterica subsp. Enteritidisovar Derby	AAC(6')-Ib-cr8	fluoroquinolone antibiotic	amikacin;glycoside;oxazolidinone	antibiotic target alteration
Serratia marcescens	AAC(6')-Ib-cr9	fluoroquinolone antibiotic	amikacin;glycoside;oxazolidinone	antibiotic target alteration
Pseudomonas aeruginosa	PDC-68	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-70	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-66	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-14	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-47	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-51	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-846	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	NDM-29	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-11	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-62	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-43	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-54	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-906	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	PDC-59	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-850	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	PDC-67	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-56	monobactam;carbapenem	None	antibiotic inactivation

<i>Pseudomonas aeruginosa</i>	PDC-52	monobactam;carbapenem	None	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-44	monobactam;carbapenem	None	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-240	monobactam;carbapenem	None	antibiotic inactivation
<i>Acinetobacter baumannii</i>	ADC-167	cephalosporin	None	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-61	monobactam;carbapenem	None	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-45	monobactam;carbapenem	None	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-49	monobactam;carbapenem	None	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-50	monobactam;carbapenem	None	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-48	monobactam;carbapenem	None	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PAC-1	cephalosporin	None	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-53	monobactam;carbapenem	None	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-72	monobactam;carbapenem	None	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-69	monobactam;carbapenem	None	antibiotic inactivation
<i>Neisseria gonorrhoeae</i>	TEM-228	monobactam;cephalosporin	cefepime, ceftazidime, ceftriaxone, cefepime, cefepime	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-23	monobactam;carbapenem	None	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-28	monobactam;carbapenem	None	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-41	monobactam;carbapenem	None	antibiotic inactivation
<i>Acinetobacter</i> sp. ETR1	OXA-668	carbapenem;penicillin beta-lactam	cefepime	antibiotic inactivation
<i>Acinetobacter radioresistens</i>	OXA-818	carbapenem;penicillin beta-lactam	cefepime	antibiotic inactivation
<i>Acinetobacter radioresistens</i>	OXA-812	carbapenem;penicillin beta-lactam	cefepime	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	PDC-105	monobactam;carbapenem	None	antibiotic inactivation
<i>Staphylococcus aureus</i> S. aureus USA300	Staphylococcus aureus USA300	macrolide antibiotic;aminoglycoside antibiotic	erythromycin, streptomycin, gentamicin, tobramycin, amikacin, netilmicin, sisomicin, streptomycin, gentamicin, tobramycin, amikacin, netilmicin, sisomicin	antibiotic inactivation
<i>Escherichia coli</i>	FosA7.5	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
<i>Escherichia coli</i>	dfrA35	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
<i>Escherichia coli</i>	CMY-134	cephalosporin	None	antibiotic inactivation
<i>Escherichia coli</i>	CMY-143	cephalosporin	None	antibiotic inactivation
<i>Escherichia coli</i>	CMY-107	cephalosporin	None	antibiotic inactivation

Escherichia coli	CMY-158	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-173	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-147	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-146	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-156	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-160	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-162	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-140	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-164	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-101	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-161	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-165	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-166	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	CMY-149	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-139	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-148	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-163	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-154	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-142	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-141	cephalosporin	None	antibiotic inactivation
Citrobacter freundii complex	CMY-124	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-125	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-145	cephalosporin	None	antibiotic inactivation
Citrobacter	CMY-122	cephalosporin	None	antibiotic inactivation
Citrobacter sp.	CMY-157	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-171	cephalosporin	None	antibiotic inactivation
Klebsiella sp. KF07	CMY-155	cephalosporin	None	antibiotic inactivation

Escherichia coli	CMY-96	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-205	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-222	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-198	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-195	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-201	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-212	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-204	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	SHV-197	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-216	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	CMY-121	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-168	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-169	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-170	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-152	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-97	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-151	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-128	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-129	cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and M229 genome sequences associated with hospital-acquired infections	TEM-229	monobactam;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	TEM-230	monobactam;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	CMY-127	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-89	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-153	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-130	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae complex	NDX-40	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	CMY-144	cephalosporin	None	antibiotic inactivation

Proteus mirabilis	CMY-138	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	OXA-544	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-194	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-220	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-210	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-208	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-206	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-226	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-196	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-211	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-219	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Escherichia coli	SHV-199	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-227	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-223	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-214	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-207	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-1b-b	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-218	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-193	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-224	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-225	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-209	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-215	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation
Acinetobacter baumannii	ADC-181	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-182	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-183	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-228	cephalosporin;penicillin beta-lactam	beta-lactam	antibiotic inactivation

Klebsiella pneumoniae	SHV-200	cephalosporin;penicillin b	monobactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-203	cephalosporin;penicillin b	monobactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-217	cephalosporin;penicillin b	monobactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-213	cephalosporin;penicillin b	monobactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-221	cephalosporin;penicillin b	monobactam	antibiotic inactivation
Klebsiella pneumoniae	SHV-202	cephalosporin;penicillin b	monobactam	antibiotic inactivation
Escherichia coli	TEM-5	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Acinetobacter baumannii	ADC-171	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-172	cephalosporin	None	antibiotic inactivation
Escherichia coli	TEM-9	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Klebsiella pneumoniae	TEM-31	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Shigella sonnei	TEM-32	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Escherichia coli	TEM-35	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Escherichia coli	TEM-36	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Escherichia coli	TEM-37	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Escherichia coli	TEM-39	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Escherichia coli	TEM-210	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Providencia stuartii	TEM-212	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Klebsiella pneumoniae	TEM-224	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Escherichia coli	TEM-225	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Escherichia coli	TEM-226	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Pseudomonas aeruginosa	TEM-234	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
mixed culture bacterium	TEM-235	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Escherichia coli	TEM-236	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Escherichia coli	TEM-237	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Escherichia coli	TEM-238	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Klebsiella variicola	TEM-240	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation

Pseudomonas aeruginosa	TEM-241	monobactam;cephalosporins	ceftazidime;cefepime	antibiotic inactivation
Providencia stuartii	TEM-242	monobactam;cephalosporins	ceftazidime;cefepime	antibiotic inactivation
Escherichia coli	TEM-243	monobactam;cephalosporins	ceftazidime;cefepime	antibiotic inactivation
Pseudomonas aeruginosa	PDC-225	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-413	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-264	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-201	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-346	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-285	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-337	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-212	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-352	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-464	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-19b	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-380	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-461	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas	PDC-19a	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-272	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-255	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-293	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-183	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-207	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-306	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-376	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-117	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-231	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation
Pseudomonas aeruginosa	PDC-104	monobactam;carbapenems	Niclosophthalate	antibiotic inactivation

Pseudomonas aeruginosa	PDC-173	monobactam;carbapenem	cefepime	antibiotic inactivation
Pseudomonas aeruginosa	PDC-292	monobactam;carbapenem	cefepime	antibiotic inactivation
Pseudomonas aeruginosa	PDC-393	monobactam;carbapenem	cefepime	antibiotic inactivation
Pseudomonas aeruginosa	PDC-119	monobactam;carbapenem	cefepime	antibiotic inactivation
Pseudomonas aeruginosa	PDC-313	monobactam;carbapenem	cefepime	antibiotic inactivation
Pseudomonas aeruginosa	PDC-257	monobactam;carbapenem	cefepime	antibiotic inactivation
Pseudomonas aeruginosa	PDC-429	monobactam;carbapenem	cefepime	antibiotic inactivation
Pseudomonas aeruginosa	PDC-449	monobactam;carbapenem	cefepime	antibiotic inactivation
Stenotrophomonas maltophilia	OXA-540	cephalosporin;penicillin beta-lactam	cefepime	antibiotic inactivation
Pseudomonas aeruginosa	OXA-779	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-838	cephalosporin;penicillin beta-lactam	cefepime	antibiotic inactivation
Pseudomonas aeruginosa	OXA-539	cephalosporin;penicillin beta-lactam	cefepime	antibiotic inactivation
Pseudomonas aeruginosa	OXA-543	cephalosporin;penicillin beta-lactam	cefepime	antibiotic inactivation
Pseudomonas aeruginosa	OXA-681	cephalosporin;penicillin beta-lactam	cefepime	antibiotic inactivation
Pseudomonas aeruginosa	OXA-737	cephalosporin;penicillin beta-lactam	cefepime	antibiotic inactivation
Pseudomonas putida	OXA-541	cephalosporin;penicillin beta-lactam	cefepime	antibiotic inactivation
Pseudomonas aeruginosa	OXA-835	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella	OXA-926	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-39	monobactam;carbapenem	cefepime	antibiotic inactivation
Ralstonia insidiosa	OXA-570	carbapenem;penicillin beta-lactam	cefepime	antibiotic inactivation
Ralstonia insidiosa	OXA-573	carbapenem;penicillin beta-lactam	cefepime	antibiotic inactivation
Ralstonia mannitolilytica	OXA-571	carbapenem;penicillin beta-lactam	cefepime	antibiotic inactivation
Acinetobacter gyllenbergii	OXA-672	carbapenem;penicillin beta-lactam	cefepime	antibiotic inactivation
Acinetobacter gyllenbergii	OXA-671	carbapenem;penicillin beta-lactam	cefepime	antibiotic inactivation
unclassified Acinetobacter	OXA-673	carbapenem;penicillin beta-lactam	cefepime	antibiotic inactivation
Acinetobacter bereziniae	OXA-931	carbapenem;penicillin beta-lactam	cefepime	antibiotic inactivation
Acinetobacter bereziniae	OXA-930	carbapenem;penicillin beta-lactam	cefepime	antibiotic inactivation

Acinetobacter baumannii	ADC-198	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-199	cephalosporin	None	antibiotic inactivation
Acinetobacter bereziniae	OXA-895	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Morganella morganii	OXA-641	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Proteus vulgaris	Trimethoprim-resistant dihydrofolate reductase DfrA42	hydroxymethyl dihydrofolate DfrA42	Trimethoprim	antibiotic target replacement
Acinetobacter lwoffii	OXA-496	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter lwoffii	OXA-915	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter lwoffii	OXA-648	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter lwoffii	OXA-646	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter bereziniae	OXA-649	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-897	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter	OXA-653	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter pittii	OXA-499	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	OXA-825	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Proteus penneri	Trimethoprim-resistant dihydrofolate reductase DfrA43	hydroxymethyl dihydrofolate DfrA43	Trimethoprim	antibiotic target replacement
Salmonella enterica	DfrA34	diaminopyrimidine antibiotic	Trimethoprim	antibiotic target replacement
Rheinheimera sp. D18	DfrA37	diaminopyrimidine antibiotic	Trimethoprim	antibiotic target replacement
Escherichia coli	DfrA36	diaminopyrimidine antibiotic	Trimethoprim	antibiotic target replacement
Acinetobacter baumannii	DfrA38	diaminopyrimidine antibiotic	Trimethoprim	antibiotic target replacement
Enterobacter cloacae	DfrB9	diaminopyrimidine antibiotic	Trimethoprim	antibiotic target replacement
Acinetobacter baumannii	ADC-102	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-103	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	DfrA39	diaminopyrimidine antibiotic	Trimethoprim	antibiotic target replacement
Escherichia coli	dfr22	diaminopyrimidine antibiotic	Trimethoprim	antibiotic target replacement
Klebsiella pneumoniae	KPC-23	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-25	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-26	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation

Escherichia coli	KPC-18	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-27	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-29	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Escherichia coli	KPC-28	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-31	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-32	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-30	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-33	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-34	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-35	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-36	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-37	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-38	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Enterobacter hormaechei	KPC-40	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-41	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-42	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-43	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Enterobacter cloacae	KPC-45	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-46	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Escherichia coli	KPC-49	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-50	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Acinetobacter baumannii	ADC-200	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-201	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-51	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-52	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-54	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-55	monobactam;carbapenem	cephalosporin;penicillin	antibiotic inactivation

Klebsiella pneumoniae	KPC-56	monobactam;carbapenem	None	cephalosporin;penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae subsp. pneumoniae	KPC-57	monobactam;carbapenem	None	cephalosporin;penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	AAK-1	carbapenem	None		antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ACC-2	monobactam;cephalosporin	cefepime;ceftriaxone;cefazidime;piperacillin	antibiotic inactivation	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ACC-3	monobactam;cephalosporin	cefepime;ceftriaxone;cefazidime;piperacillin	antibiotic inactivation	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ACC-4	monobactam;cephalosporin	cefepime;ceftriaxone;cefazidime;piperacillin	antibiotic inactivation	antibiotic inactivation
Hafnia alvei	ACC-1d	monobactam;cephalosporin	cefepime;ceftriaxone;cefazidime;piperacillin	antibiotic inactivation	antibiotic inactivation
Hafnia alvei	ACC-7	monobactam;cephalosporin	cefepime;ceftriaxone;cefazidime;piperacillin	antibiotic inactivation	antibiotic inactivation
Klebsiella pneumoniae	ACC-8	monobactam;cephalosporin	cefepime;ceftriaxone;cefazidime;piperacillin	antibiotic inactivation	antibiotic inactivation
Enterobacter cloacae complex	ACT-45	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter	ACT-46	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter	ACT-47	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter	ACT-48	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ACT-49	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ACT-50	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter kobei	ACT-51	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae complex	ACT-52	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae complex	ACT-53	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae complex	ACT-54	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-55	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae complex	ACT-56	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae complex	ACT-57	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae complex	ACT-58	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-59	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-60	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-61	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae complex	ACT-62	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation

Enterobacter cloacae complex	ACT-63	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter	ACT-64	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae complex	ACT-65	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter hormaechei	ACT-66	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae complex	ACT-67	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter asburiae	ACT-68	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae complex	ACT-69	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae complex	ACT-70	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae complex	ACT-72	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-73	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae complex	ACT-74	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter hormaechei	ACT-75	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter	ACT-76	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter	ACT-77	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-78	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-79	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-80	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-81	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-82	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter hormaechei	ACT-83	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae complex	ACT-84	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter kobei	ACT-87	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-100	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-120	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-121	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-122	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-123	cephalosporin	None	antibiotic inactivation

Acinetobacter baumannii	ADC-125	cephalosporin	None	antibiotic inactivation
Acinetobacter calcoaceticus	ADC-127	cephalosporin	None	antibiotic inactivation
Acinetobacter calcoaceticus	ADC-128	cephalosporin	None	antibiotic inactivation
Acinetobacter calcoaceticus	ADC-129	cephalosporin	None	antibiotic inactivation
Acinetobacter	ADC-130	cephalosporin	None	antibiotic inactivation
Acinetobacter nosocomialis	ADC-131	cephalosporin	None	antibiotic inactivation
Acinetobacter	ADC-132	cephalosporin	None	antibiotic inactivation
Acinetobacter	ADC-133	cephalosporin	None	antibiotic inactivation
Acinetobacter sp. NIPH 542	ADC-134	cephalosporin	None	antibiotic inactivation
Acinetobacter	ADC-135	cephalosporin	None	antibiotic inactivation
Acinetobacter calcoaceticus	ADC-136	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-137	cephalosporin	None	antibiotic inactivation
Acinetobacter lactucae	ADC-138	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-139	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-140	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-141	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-143	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-144	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-145	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-146	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-147	cephalosporin	None	antibiotic inactivation
Acinetobacter nosocomialis	ADC-148	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-149	cephalosporin	None	antibiotic inactivation
Acinetobacter	ADC-150	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-151	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-152	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-153	cephalosporin	None	antibiotic inactivation

Acinetobacter baumannii	ADC-154	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-155	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-173	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-174	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-175	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-176	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-177	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-178	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-179	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-180	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-184	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-185	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-186	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-187	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-202	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-203	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-204	cephalosporin	None	antibiotic inactivation
Acinetobacter calcoaceticus	ADC-205	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-206	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-207	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-208	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-209	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-210	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-211	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-212	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-213	cephalosporin	None	antibiotic inactivation
Acinetobacter	ADC-214	cephalosporin	None	antibiotic inactivation

Acinetobacter baumannii	ADC-215	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-216	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-217	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-218	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-219	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-220	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-221	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-222	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-223	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-224	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-225	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-226	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-227	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-228	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-229	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-230	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-231	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-232	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-233	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-234	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-235	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-236	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-237	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-238	cephalosporin	None	antibiotic inactivation
Acinetobacter calcoaceticus/Acinetobacter baumannii complex	ADC-239	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-24	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-240	cephalosporin	None	antibiotic inactivation

Acinetobacter baumannii	ADC-241	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-242	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-243	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-244	cephalosporin	None	antibiotic inactivation
Acinetobacter calcoaceticus/Acinetobacter baumannii complex	ADC-245	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-246	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-247	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-248	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-249	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-250	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-251	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-252	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-253	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-254	cephalosporin	None	antibiotic inactivation
Acinetobacter nosocomialis	ADC-255	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-256	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-29	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-32	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-33	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-38	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-51	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-52	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-53	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-54	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-57	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-63	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-65	cephalosporin	None	antibiotic inactivation

Acinetobacter baumannii	ADC-66	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-70	cephalosporin	None	antibiotic inactivation
Acinetobacter	ADC-80	cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ADC-82	cephalosporin associated with antimicrobial resistance	None	antibiotic inactivation
Acinetobacter baumannii	ADC-84	cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ADC-85	cephalosporin associated with antimicrobial resistance	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ADC-86	cephalosporin associated with antimicrobial resistance	None	antibiotic inactivation
Acinetobacter baumannii	ADC-87	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-88	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-89	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-90	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-91	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-92	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-93	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-94	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-95	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-96	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-97	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-98	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-99	cephalosporin	None	antibiotic inactivation
Alcaligenes faecalis	AFM-1	carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	AFM-2	carbapenem	None	antibiotic inactivation
uncultured bacterium	ALG11-1	carbapenem	None	antibiotic inactivation
uncultured bacterium	ALG6-1	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ALA-1	carbapenem associated with antimicrobial resistance	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ALA-2	carbapenem associated with antimicrobial resistance	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ALA-3	carbapenem associated with antimicrobial resistance	None	antibiotic inactivation

Achromobacter xylosoxidans	AXC-1	carbapenem	None	antibiotic inactivation
Achromobacter ruhlandii	AXC-2	carbapenem	None	antibiotic inactivation
Achromobacter	AXC-3	carbapenem	None	antibiotic inactivation
Achromobacter xylosoxidans	AXC-4	carbapenem	None	antibiotic inactivation
Achromobacter xylosoxidans	AXC-5	carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	BEL-4	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	BKC-2	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-1	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	BlaB-10	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-11	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	BlaB-12	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	BlaB-13	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	BlaB-14	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-15	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-16	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia anophelis	BlaB-17	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia anophelis	BlaB-18	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	BlaB-19	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-21	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia anophelis	BlaB-20	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-22	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	BlaB-23	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-24	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-25	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-26	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-27	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-28	carbapenem;penicillin beta-lactam	None	antibiotic inactivation

Elizabethkingia anophelis	BlaB-29	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	BlaB-3	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia anophelis	BlaB-30	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-31	carbapenem;penicillin beta-lactam	Global resistance	antibiotic inactivation
Elizabethkingia anophelis	BlaB-32	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia anophelis	BlaB-33	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-34	carbapenem;penicillin beta-lactam	Global resistance	antibiotic inactivation
Elizabethkingia meningoseptica	BlaB-35	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-36	carbapenem;penicillin beta-lactam	Global resistance	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-37	carbapenem;penicillin beta-lactam	Global resistance	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-38	carbapenem;penicillin beta-lactam	Global resistance	antibiotic inactivation
Elizabethkingia meningoseptica	BlaB-6	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-6	carbapenem;penicillin beta-lactam	Global resistance	antibiotic inactivation
Elizabethkingia meningoseptica	BlaB-7	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	BlaB-8	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	BlaB-9	carbapenem;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-10	carbapenem;penicillin beta-lactam	Global resistance	antibiotic inactivation
Buttiauxella agrestis	BUT-2	cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	BlaB-11	carbapenem;penicillin beta-lactam	Global resistance	antibiotic inactivation
Pseudomonas aeruginosa	CARB-11	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-24	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-25	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-26	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-27	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-28	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-29	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-30	penicillin beta-lactam	None	antibiotic inactivation

Vibrio parahaemolyticus	CARB-31	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-32	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-33	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-34	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-35	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-36	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-38	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-40	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-41	penicillin beta-lactam	None	antibiotic inactivation
Vibrio	CARB-42	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-43	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-44	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-45	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-46	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-47	penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	CARB-48	penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter baumannii	CARB-49	penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other organisms	CARB-50	penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	CARB-51	penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	CARB-52	penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	CARB-53	penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	CARB-54	penicillin beta-lactam	None	antibiotic inactivation
Salmonella enterica	CARB-55	penicillin beta-lactam	None	antibiotic inactivation
Clostridioides difficile	CDD-1	carbapenem	None	antibiotic inactivation
Clostridioides difficile	CDD-2	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CepA-29	cephalosporin	None	antibiotic inactivation
Bacteroides fragilis	CepA-44	cephalosporin	None	antibiotic inactivation

Bacteroides	CepA-49	cephalosporin	None	antibiotic inactivation
Bacteroides fragilis	CfiA10	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA11	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA14	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA17	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA18	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA19	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA2	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA21	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA22	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA23	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA24	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA26	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA27	carbapenem	None	antibiotic inactivation
Bacteroides	CfiA4	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA8	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA9	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences deposited with antimicrobial resistance	CMH-1	cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences deposited with antimicrobial resistance	CMH-2	cephalosporin	None	antibiotic inactivation
Elizabethkingia meningoseptica	EME2	penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	CMH-2	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-3	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-4	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-5	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-6	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-106	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-109	cephalosporin	None	antibiotic inactivation

Escherichia coli	CMY-131	cephalosporin	None	antibiotic inactivation
Citrobacter	CMY-137	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-159	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	CMY-167	cephalosporin	None	antibiotic inactivation
Providencia stuartii	CMY-168	cephalosporin	None	antibiotic inactivation
Providencia rettgeri	CMY-169	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CMY-170	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CMY-174	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CMY-8b	cephalosporin	None	antibiotic inactivation
uncultured bacterium	CRD3-1	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences associated with antimicrobial resistance	CRH-1	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences associated with antimicrobial resistance	CRH-2	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences associated with antimicrobial resistance	CRH-3	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences associated with antimicrobial resistance	CRH-4	carbapenem	None	antibiotic inactivation
Cronobacter sakazakii	CSA-1	cephalosporin	None	antibiotic inactivation
Cronobacter sakazakii	CSA-2	cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences associated with antimicrobial resistance	CRP-1	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-127	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-138	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	CTX-M-140	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-143	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-146	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-150	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-153	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-154	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	CTX-M-167	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-168	cephalosporin	None	antibiotic inactivation

Escherichia coli	CTX-M-169	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-170	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	CTX-M-171	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-172	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-173	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-174	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-175	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-176	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CTX-M-177	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-178	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-179	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-180	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-181	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-182	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-183	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-184	cephalosporin	None	antibiotic inactivation
Kluyvera	CTX-M-185	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-186	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CTX-M-187	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-188	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-189	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-190	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-191	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-192	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-193	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-194	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-195	cephalosporin	None	antibiotic inactivation

Escherichia coli	CTX-M-196	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-197	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-198	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-199	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-200	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-201	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-202	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-203	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-204	cephalosporin	None	antibiotic inactivation
Kluyvera georgiana	CTX-M-205	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	CTX-M-206	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-207	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-208	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-209	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-210	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-211	cephalosporin	None	antibiotic inactivation
Proteus mirabilis	CTX-M-212	cephalosporin	None	antibiotic inactivation
Kluyvera genomosp. 2	CTX-M-213	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-214	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-215	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-216	cephalosporin	None	antibiotic inactivation
Providencia stuartii	CTX-M-217	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-218	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-219	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-220	cephalosporin	None	antibiotic inactivation
Serratia marcescens	CTX-M-221	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-222	cephalosporin	None	antibiotic inactivation

Escherichia coli	CTX-M-223	cephalosporin	None	antibiotic inactivation
Enterobacter kobei	CTX-M-224	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-225	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-226	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-227	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CTX-M-228	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	CTX-M-229	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-230	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-231	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-232	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-233	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-234	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-235	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-236	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-237	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-238	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-239	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-240	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-241	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-242	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-244	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-73	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-97	cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences associated with antimicrobial resistance		carbamazepine	None	antibiotic inactivation
Klebsiella pneumoniae	DHA-23	cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	DHA-24	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	DHA-25	cephalosporin	None	antibiotic inactivation

Klebsiella pneumoniae	DHA-26	cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	DHA-27	cephalosporin	None	antibiotic inactivation
Morganella morganii	DHA-28	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	DHA-29	cephalosporin	None	antibiotic inactivation
Morganella morganii	DHA-4	cephalosporin	None	antibiotic inactivation
uncultured bacterium	DHT2-1	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	DHT2-2	carbapenem	None	antibiotic inactivation
Empedobacter falsenii	EBR-3	carbapenem;cephalosporin	None	antibiotic inactivation
Empedobacter falsenii	EBR-4	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	EC-13	cephalosporin	None	antibiotic inactivation
Escherichia coli	EC-14	cephalosporin	None	antibiotic inactivation
Escherichia coli	EC-15	cephalosporin	None	antibiotic inactivation
Escherichia coli	EC-16	cephalosporin	None	antibiotic inactivation
Escherichia coli	EC-18	cephalosporin	None	antibiotic inactivation
Escherichia coli	EC-19	cephalosporin	None	antibiotic inactivation
Escherichia	EC-5	cephalosporin	None	antibiotic inactivation
Escherichia coli	EC-8	cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	EC-11	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	EC-12	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	EC-17	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	EC-20	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	EC-21	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	EC-22	carbapenem	None	antibiotic inactivation
Aeromonas caviae	FOX-12	cephalosporin	None	antibiotic inactivation
Providencia rettgeri	FOX-13	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	FOX-14	cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	FOX-15	cephalosporin	None	antibiotic inactivation

Klebsiella pneumoniae	FOX-16	cephalosporin	None	antibiotic inactivation
Providencia stuartii	FOX-17	cephalosporin	None	antibiotic inactivation
Escherichia coli	FRI-10	penicillin beta-lactam	None	antibiotic inactivation
Citrobacter freundii	GES-25	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-27	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-28	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-29	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-30	carbapenem;cephalosporin	None	antibiotic inactivation
Aeromonas caviae	GES-31	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-32	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-33	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-34	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	GES-35	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-36	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-37	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-38	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-39	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-40	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-41	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-42	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-43	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-44	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-45	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	GES-46	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GMB-1	carbapenem;cephalosporin	Global resistance	antibiotic inactivation
Citrobacter freundii	GMB-1	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GMB-1	carbapenem;cephalosporin	Global resistance	antibiotic inactivation

Bacteria, Viruses, Fungi, and other genome sequences	GOB-20	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia anophelis	GOB-21	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia meningoseptica	GOB-22	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GOB-23	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia anophelis	GOB-24	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GOB-25	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia anophelis	GOB-26	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia meningoseptica	GOB-27	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia anophelis	GOB-28	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GOB-29	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia anophelis	GOB-30	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GOB-31	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GOB-32	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GOB-33	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GOB-34	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GOB-35	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GOB-36	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GOB-37	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia anophelis	GOB-38	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia anophelis	GOB-39	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia anophelis	GOB-40	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia anophelis	GOB-41	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia anophelis	GOB-42	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia anophelis	GOB-43	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia meningoseptica	GOB-44	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia anophelis	GOB-45	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia meningoseptica	GOB-46	carbapenem;cephalosporin	None	antibiotic inactivation

Elizabethkingia anophelis	GOB-48	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GOB-49	carbapenem;cephalosporin	None	antibiotic inactivation
Elizabethkingia anophelis	GOB-50	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	GOB-51	carbapenem;cephalosporin	None	antibiotic inactivation
uncultured bacterium	GRD23-1	carbapenem	None	antibiotic inactivation
uncultured bacterium	GRD33-1	carbapenem	None	antibiotic inactivation
Enterobacter cloacae complex	IMI-12	carbapenem	None	antibiotic inactivation
Enterobacter asburiae	IMI-13	carbapenem	None	antibiotic inactivation
Enterobacter hormaechei	IMI-14	carbapenem	None	antibiotic inactivation
Enterobacter cloacae	IMI-15	carbapenem	None	antibiotic inactivation
Enterobacter cloacae	IMI-16	carbapenem	None	antibiotic inactivation
Enterobacter cloacae	IMI-17	carbapenem	None	antibiotic inactivation
Enterobacter cloacae	IMI-18	carbapenem	None	antibiotic inactivation
Enterobacter cloacae	IMI-19	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	IMI-20	carbapenem	None	antibiotic inactivation
Enterobacter asburiae	IMI-21	carbapenem	None	antibiotic inactivation
Enterobacter cloacae	IMI-5	carbapenem	None	antibiotic inactivation
Raoultella ornithinolytica	IMI-6	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	IMI-9	carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-17	carbapenem;cephalosporin	None	antibiotic inactivation
Citrobacter freundii	IMP-23	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-39	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas putida	IMP-46	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-53	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-54	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas putida	IMP-58	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	IMP-59	carbapenem;cephalosporin	None	antibiotic inactivation

Enterobacter cloacae	IMP-60	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	IMP-61	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-62	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas	IMP-63	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	IMP-64	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-65	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	IMP-66	carbapenem;cephalosporin	None	antibiotic inactivation
Providencia rettgeri	IMP-67	carbapenem;cephalosporin	None	antibiotic inactivation
Providencia	IMP-69	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-70	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-71	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-73	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas	IMP-74	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-75	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-76	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-77	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-78	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-79	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-80	carbapenem;cephalosporin	None	antibiotic inactivation
uncultured bacterium	IMP-81	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-82	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-83	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-84	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-85	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-88	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas putida	IMP-89	carbapenem;cephalosporin	None	antibiotic inactivation
Chryseobacterium	IND-16	carbapenem	None	antibiotic inactivation

Bacteria, Viruses, Fungi, and other genome sequences associated	KLUC-1	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	KLUC-2	cephalosporin	None	antibiotic inactivation
Escherichia coli	KLUC-3	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	KLUC-4	cephalosporin	None	antibiotic inactivation
Raoultella ornithinolytica	KLUC-5	cephalosporin	None	antibiotic inactivation
Escherichia coli	KPC-21	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-44	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-58	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-59	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Escherichia coli	KPC-60	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-61	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-62	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-63	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-64	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-65	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-66	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-71	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-72	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-73	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-74	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-75	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-76	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-77	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-78	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-79	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-80	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-81	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation

Citrobacter koseri	KPC-82	monobactam;carbapenem;cephalosporin;penicillin	antibiotic inactivation
Klebsiella	LEN-27	penicillin beta-lactam	antibiotic inactivation
Klebsiella variicola	LEN-28	penicillin beta-lactam	antibiotic inactivation
Klebsiella	LEN-31	penicillin beta-lactam	antibiotic inactivation
Laribacter hongkongensis	LHK-1	carbapenem;cephalosporin	antibiotic inactivation
Laribacter hongkongensis	LHK-2	carbapenem;cephalosporin	antibiotic inactivation
Laribacter hongkongensis	LHK-3	carbapenem;cephalosporin	antibiotic inactivation
Laribacter hongkongensis	LHK-4	carbapenem;cephalosporin	antibiotic inactivation
Laribacter hongkongensis	LHK-5	carbapenem;cephalosporin	antibiotic inactivation
Laribacter hongkongensis	LHK-6	carbapenem;cephalosporin	antibiotic inactivation
uncultured bacterium	LRG-1	cephalosporin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	LUT-1	carbapenem;cephalosporin	antibiotic inactivation
Pseudomonas	LUT-1	cephalosporin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	LUT-2	cephalosporin with antimicrobial resistance	antibiotic inactivation
Pseudomonas	LUT-3	cephalosporin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	LUT-4	cephalosporin with antimicrobial resistance	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	LUT-5	cephalosporin with antimicrobial resistance	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	LUT-6	cephalosporin with antimicrobial resistance	antibiotic inactivation
Citrobacter koseri	MAL-1	carbapenem	antibiotic inactivation
Citrobacter koseri	MAL-2	carbapenem	antibiotic inactivation
Caulobacter vibrioides	MBL1b	carbapenem	antibiotic inactivation
Enterobacter sp. ET82	MIR-18	monobactam;cephalosporin	antibiotic inactivation
Enterobacter cloacae complex	MIR-19	monobactam;cephalosporin	antibiotic inactivation
Enterobacter	MIR-20	monobactam;cephalosporin	antibiotic inactivation
Enterobacter cloacae complex	MIR-21	monobactam;cephalosporin	antibiotic inactivation
Enterobacter cloacae complex	MIR-22	monobactam;cephalosporin	antibiotic inactivation
Enterobacter cloacae complex	MIR-7	monobactam;cephalosporin	antibiotic inactivation

Myroides odoratus	MOC-1	carbapenem	None	antibiotic inactivation
Morganella morganii	MOR-2	cephalosporin	None	antibiotic inactivation
Aeromonas caviae	MOX-10	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Aeromonas media	MOX-11	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Aeromonas	MOX-12	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter sp.	MOX-13	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	MOX-14	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Myroides odoratimimus	MYO-1	carbapenem	None	antibiotic inactivation
Myxococcus	MYX-1	carbapenem	None	antibiotic inactivation
Escherichia coli	NDM-26	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella oxytoca	NDM-30	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Citrobacter werkmanii	NDM-31	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Plasmid PDS075	OHIO-1	cephalosporin	None	antibiotic inactivation
Klebsiella quasipneumoniae	OKP-A-17	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella quasipneumoniae	OKP-B-16	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella quasipneumoniae	OKP-B-21	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella quasipneumoniae	OKP-B-22	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella	OKP-B-23	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella quasipneumoniae	OKP-B-24	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella	OKP-B-34	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella quasipneumoniae	OKP-B-36	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella quasipneumoniae	OKP-B-40	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella quasipneumoniae	OKP-B-41	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella quasipneumoniae	OKP-B-45	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	OKP-D	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	OKP-D	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Raoultella	ORN-1	carbapenem;cephalosporin	None	antibiotic inactivation

Bacteria, Viruses, Fungi, and other genome sequences	ORF1-2	carbamazepine, cephalosporins	antibiotic resistance	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ORF3	carbamazepine, cephalosporins	antibiotic resistance	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ORF4	carbamazepine, cephalosporins	antibiotic resistance	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ORF5	carbamazepine, cephalosporins	antibiotic resistance	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ORF6	carbamazepine, cephalosporins	antibiotic resistance	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ORF7	carbamazepine, cephalosporins	antibiotic resistance	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114b	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114c	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114d	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114e	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114f	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114g	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114h	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter	OXA-114i	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114j	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114k	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114l	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114m	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114n	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114p	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114q	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114r	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114s	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114t	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114u	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114v	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-114w	penicillin beta-lactam	oxacillin	antibiotic inactivation

Achromobacter xylosoxidans	OXA-114x	penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	OXA-159	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter	OXA-193	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter colistiniresistans	OXA-307	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas	OXA-395	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas	OXA-396	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter	OXA-489	penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	OXA-491	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter	OXA-493	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas	OXA-494	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-497	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter johnsonii	OXA-498	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter calcoaceticus baumannii complex	OXA-500	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-501	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter calcoaceticus baumannii complex	OXA-502	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-503	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Aeromonas caviae	OXA-504	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-505	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter	OXA-506	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-507	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-508	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-509	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-510	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-511	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-512	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter insuavis	OXA-513	penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	OXA-514	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation

Bacteria, Viruses, Fungi, DNA-515	OXA-515 genome sequence	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-516	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-517	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, DNA-518	OXA-518 genome sequence	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-519	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-520	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-521	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, DNA-522	OXA-522 genome sequence	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-523	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-524	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-525	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, DNA-526	OXA-526 genome sequence	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, DNA-527	OXA-527 genome sequence	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-528	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-529	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-530	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-531	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-532	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-533	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-534	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-536	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter schindleri	OXA-537	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Shewanella xiamenensis	OXA-538	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-542	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-545	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Shewanella xiamenensis	OXA-546	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Shewanella	OXA-547	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation

Bacteria, Viruses, Fungi, and other genome sequences	OXA-548	penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	OXA-549	penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	OXA-550	penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	OXA-551	penicillin beta-lactam	oxacillin	antibiotic inactivation
Shewanella	OXA-552	penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	OXA-553	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-554	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-555	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-556	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-557	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-558	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-559	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-560	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-561	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-562	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter pittii	OXA-563	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter pittii	OXA-564	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-565	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	OXA-566	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-567	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	OXA-568	penicillin beta-lactam	oxacillin	antibiotic inactivation
Ralstonia insidiosa	OXA-569	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Ralstonia mannitolilytica	OXA-572	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Ralstonia insidiosa	OXA-574	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter haemolyticus	OXA-575	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Campylobacter jejuni	OXA-576	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-577	penicillin beta-lactam	oxacillin	antibiotic inactivation

[illegible]

[illegible]

Campylobacter jejuni	OXA-632	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-633	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-634	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-635	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-636	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter	OXA-637	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter	OXA-638	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-639	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-640	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter calcoaceticus/OXA-642	OXA-642	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter johnsonii	OXA-643	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter johnsonii	OXA-644	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter johnsonii	OXA-645	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter johnsonii	OXA-650	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter johnsonii	OXA-651	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter johnsonii	OXA-652	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-654	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	OXA-655	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Enterobacter cloacae	OXA-656	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter baumannii	OXA-657	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Campylobacter	OXA-658	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-659	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-660	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter venetianus	OXA-661	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter johnsonii	OXA-662	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	OXA-666	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter guillouiae	OXA-667	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation

Bacteria, Viruses, Fungi, and Archaea genome sequences	OXA-669	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter colistiniresistans	OXA-670	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Bacteria, Viruses, Fungi, and Archaea genome sequences	OXA-674	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Pseudomonas aeruginosa	OXA-675	cephalosporin;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Pseudomonas aeruginosa	OXA-676	cephalosporin;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Pseudomonas aeruginosa	OXA-677	cephalosporin;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter pittii	OXA-678	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-679	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-680	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-682	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-683	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-684	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-685	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-686	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-687	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-688	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-689	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-690	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-691	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-692	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-693	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-694	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-695	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-696	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-697	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-698	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation
Acinetobacter baumannii	OXA-699	carbapenem;penicillin beta-lactamase	antibiotic resistance	antibiotic inactivation

Acinetobacter baumannii	OXA-700	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-701	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-702	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-703	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-704	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-705	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-706	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-707	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-708	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-709	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-710	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-711	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-712	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-713	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-714	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-715	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-716	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-717	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-718	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-719	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-720	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-721	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-722	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-723	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Aeromonas hydrophila	OXA-726	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter	OXA-727	penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and OXA-728 genome sequence associated with an	OXA-728	penicillin beta-lactam	oxacillin resistance	antibiotic inactivation

Shewanella algae	OXA-729	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-730	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Shewanella sp.	OXA-731	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-732	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-733	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-734	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-735	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	OXA-736	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-738	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-739	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-740	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-741	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-742	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-743	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-744	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-745	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-746	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-747	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-748	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-749	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-750	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-751	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-752	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-753	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-754	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-755	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-756	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation

Acinetobacter baumannii	OXA-757	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-758	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-759	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-760	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-761	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-762	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-763	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-764	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-765	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-766	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-767	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-768	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-769	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-770	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-771	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-772	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-773	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-774	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-775	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-776	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter pittii	OXA-777	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter pittii	OXA-778	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Aeromonas	OXA-780	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-781	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Acinetobacter baumannii	OXA-782	carbapenem;penicillin beta-lactam	tetracycline	antibiotic inactivation
Campylobacter coli	OXA-783	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter	OXA-784	penicillin beta-lactam	oxacillin	antibiotic inactivation

Campylobacter jejuni	OXA-785	penicillin beta-lactam	oxacillin	antibiotic inactivation
Campylobacter jejuni	OXA-786	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter dolens	OXA-787	penicillin beta-lactam	oxacillin	antibiotic inactivation
Providencia stuartii	OXA-788	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Achromobacter dolens	OXA-789	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-793	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-794	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-795	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Proteus sp. VIITMP5	OXA-796	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-797	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-798	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-799	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-800	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter pittii	OXA-801	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter pittii	OXA-802	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter pittii	OXA-803	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter pittii	OXA-804	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and OXA-805 genome sequence	OXA-805	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter radioresistens	OXA-806	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter radioresistens	OXA-807	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter radioresistens	OXA-808	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter radioresistens	OXA-809	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter radioresistens	OXA-810	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter radioresistens	OXA-811	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter	OXA-813	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter radioresistens	OXA-814	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter radioresistens	OXA-815	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation

Acinetobacter	OXA-816	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter radioresistens	OXA-817	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-819	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-820	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-821	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-822	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-823	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Pseudomonas aeruginosa	OXA-824	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter pittii	OXA-826	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-827	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Acinetobacter baumannii	OXA-828	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-829	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other organisms	OXA-830	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-831	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-832	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-833	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-834	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-836	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Achromobacter xylosoxidans	OXA-839	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-840	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-841	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-842	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-843	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-844	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter haemolyticus	OXA-845	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas	OXA-847	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-848	penicillin beta-lactam	oxacillin	antibiotic inactivation

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Acinetobacter baumannii	OXA-877	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-878	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-879	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-880	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-881	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-882	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-883	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-884	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-885	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-886	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-887	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-888	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-889	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-890	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-891	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-892	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-893	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Shewanella xiamenensis	OXA-894	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Enterobacter cloacae	OXA-896	penicillin beta-lactam	oxacillin	antibiotic inactivation
Citrobacter freundii	OXA-900	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-901	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-902	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-903	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-904	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas	OXA-905	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-907	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-908	penicillin beta-lactam	oxacillin	antibiotic inactivation

Acinetobacter baumannii	OXA-909	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-910	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-911	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Aeromonas	OXA-912	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas	OXA-913	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-914	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-916	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-917	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-918	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	OXA-919	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-920	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella quasipneumoniae	OXA-921	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Enterobacter kobei	OXA-922	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Enterobacter kobei	OXA-923	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Citrobacter freundii	OXA-924	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter ruhlandii	OXA-925	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-927	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-928	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Escherichia coli	OXA-929	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Raoultella ornithinolytica	OXA-932	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-935	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-937	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-938	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-939	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-940	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-941	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-942	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation

Acinetobacter pittii	OXA-943	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter bereziniae	OXA-945	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-946	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter lactucae	OXA-947	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter pittii	OXA-948	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter lactucae	OXA-949	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella oxytoca	OXY-2-11	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-12	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-13	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-14	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-15	monobactam;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PAU-1	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-100	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-101	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-102	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-103	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-106	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-107	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-108	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-109	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-110	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-111	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-112	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-113	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-114	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-115	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-116	monobactam;carbapenem;cephalosporin	None	antibiotic inactivation

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Pseudomonas aeruginosa	PDC-71	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-94	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-95	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-96	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-97	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-98	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-99	monobactam;carbapenem	None	antibiotic inactivation
Acinetobacter baumannii	PER-10	monobactam;carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	PER-11	monobactam;carbapenem;penicillin	None	antibiotic inactivation
Providencia rettgeri	PER-12	monobactam;carbapenem	None	antibiotic inactivation
Acinetobacter baumannii	PER-13	monobactam;carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	PER-14	monobactam;carbapenem;penicillin	None	antibiotic inactivation
Pseudomonas aeruginosa	PER-15	monobactam;carbapenem	None	antibiotic inactivation
Proteus mirabilis	PER-16	monobactam;carbapenem	None	antibiotic inactivation
Acinetobacter baumannii	PER-8	monobactam;carbapenem	None	antibiotic inactivation
Acinetobacter baumannii	PER-9	monobactam;carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	PFM-1	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	PFM-2	carbapenem	None	antibiotic inactivation
Pseudomonas fluorescens	PFM-3	carbapenem	None	antibiotic inactivation
Raoultella planticola	PLA-1	carbapenem;cephalosporin	None	antibiotic inactivation
Raoultella planticola	PLA-2a	carbapenem;cephalosporin	None	antibiotic inactivation
Raoultella planticola	PLA-3	carbapenem;cephalosporin	None	antibiotic inactivation
Raoultella planticola	PLA-6	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	POM-1	carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PME-1	carbapenem	None	antibiotic inactivation
Pseudomonas	POM-1	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	POM-2	carbapenem	None	antibiotic inactivation

Pseudomonas stutzeri	PST-1	carbapenem	None	antibiotic inactivation
Pseudomonas	PST-2	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	PSM-1	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	PSM-2	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	PSM-2	carbapenem;cephalosporin	None	antibiotic inactivation
uncultured bacterium	RSA2-1	carbapenem	None	antibiotic inactivation
uncultured bacterium	RSD2-1	carbapenem;cephalosporin	None	antibiotic inactivation
uncultured bacterium	RSD2-2	carbapenem;cephalosporin	None	antibiotic inactivation
Serratia rubidaea	RUB-1	cephalosporin	None	antibiotic inactivation
Serratia fonticola	SFC-1	carbapenem	None	antibiotic inactivation
Enterobacter cloacae	SFO-1	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	SGM-1	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	SGM-2	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	SGM-3	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	SGM-4	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	SGM-5	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	SGM-6	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	SGM-7	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	SGM-8	carbapenem	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-115	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-116	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-132	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-146	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-171	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-190	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-191	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	SIM-2	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation

uncultured bacterium	SPN79-1	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	SPN79-1	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	SPN79-1	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	SPN79-1	carbapenem	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	SPN79-1	cephalosporin	None	antibiotic inactivation
Serratia marcescens	SST-1	cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	SST-1	carbapenem	None	antibiotic inactivation
Escherichia coli	TEM-98	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Escherichia coli	TEM-99	monobactam;cephalosporin	ceftazidime;betipacidam	antibiotic inactivation
Raoultella terrigena	TER-1	carbapenem;cephalosporin	None	antibiotic inactivation
Raoultella terrigena	TER-2	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	TER-2	carbapenem	None	antibiotic inactivation
Proteus mirabilis	VEB-10	monobactam;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VEB-11	monobactam;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VEB-12	monobactam;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VEB-13	monobactam;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VEB-14	monobactam;cephalosporin	None	antibiotic inactivation
Escherichia coli	VEB-15	monobactam;cephalosporin	None	antibiotic inactivation
Escherichia coli	VEB-17	monobactam;cephalosporin	None	antibiotic inactivation
Escherichia coli	VEB-19	monobactam;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VEB-20	monobactam;cephalosporin	None	antibiotic inactivation
Acinetobacter calcoaceticus/Baumannii complex	VEB-21	monobactam;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VEB-22	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	VEB-23	monobactam;cephalosporin	None	antibiotic inactivation
Providencia rettgeri	VEB-24	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae subspecies pneumoniae	VEB-25	monobactam;cephalosporin	None	antibiotic inactivation
Serratia marcescens	VEB-26	monobactam;cephalosporin	None	antibiotic inactivation

Providencia stuartii	VEB-27	monobactam;cephalosporin	None	antibiotic inactivation	
Vibrio harveyi	VHH-1	carbapenem;cephalosporin	imipenem;meropenem	antibiotic inactivation	
Vibrio harveyi	VHW-1	carbapenem;cephalosporin	imipenem;meropenem	antibiotic inactivation	
Enterobacter cloacae	VIM-40	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-41	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-44	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-45	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-46	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-47	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	VIM-48	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-49	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-50	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	VIM-51	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	VIM-52	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-53	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Serratia marcescens	VIM-54	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	VIM-55	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Citrobacter freundii	VIM-56	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Escherichia coli	VIM-57	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	VIM-58	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Citrobacter freundii	VIM-59	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-60	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-61	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Pseudomonas putida	VIM-62	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-63	carbapenem;cephalosporin	cefepime;ceftazidime;meropenem	penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	VIM-64	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation
Citrobacter freundii	VIM-65	carbapenem;cephalosporin	None	penicillin beta-lactam	antibiotic inactivation

Pseudomonas aeruginosa	VIM-66	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter hormaechei	VIM-67	carbapenem;cephalosporin	None	antibiotic inactivation
Providencia stuartii	VIM-68	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VIM-69	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VIM-70	carbapenem;cephalosporin	None	antibiotic inactivation
Vibrio alginolyticus	VIM-71	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VIM-72	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VIM-73	carbapenem;cephalosporin	None	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	EDM	carbapenem	carbapenem resistance	antibiotic inactivation
Bacteria, Viruses, Fungi, and other genome sequences	ZOO	carbapenem	carbapenem resistance	antibiotic inactivation
Staphylococcus aureus	norC	fluoroquinolone antibiotic	disinfecting agents and antiseptics	antibiotic efflux
Enterobacter cloacae	MCR-10.5	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Enterobacter kobei	MCR-10.3	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Streptococcus mutans	mdeA	fluoroquinolone antibiotic	aminoglycosides, rifampin, kanamycin, tetracycline, erythromycin, clindamycin, etc.	antibiotic efflux
Staphylococcus	sepA	disinfecting agents and antiseptics	antiseptics	antibiotic efflux
Staphylococcus aureus	ssaM aureus N315	fluoroquinolone antibiotic	disinfecting agents and antiseptics	antibiotic efflux
Staphylococcus aureus	qacJ	disinfecting agents and antiseptics	disinfectants	antibiotic efflux
Bacteria, Viruses, Fungi, and other genome sequences	and other genome sequences	disinfecting agents and antiseptics	disinfectants	antibiotic efflux
Shewanella denitrificans	SHD-1	carbapenem;cephalosporin	None	antibiotic inactivation
Enterococcus faecium	fexB	phenicol antibiotic	florfenicol	antibiotic efflux
Escherichia coli	NDM-33	fluoroquinolone antibiotic	carbapenem;cephalosporin	antibiotic inactivation
Mycoplasmopsis fermentans	Myo-PG18	macrolide antibiotic	erythromycin;resistance	antibiotic target alteration
Alkalihalobacillus clausii	Alkalihalobacillus clausii	phenicol antibiotic	chloramphenicol	antibiotic inactivation
Limosilactobacillus reuteri	Limosilactobacillus reuteri	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic inactivation
Enterococcus faecium	vanY gene in vanA cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Enterococcus gallinarum	vanXY gene in vanC cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecium	vanH gene in vanA cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration

Enterococcus faecium	vanX gene in vanA cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Actinomadura sp. R39	R39	penicillin beta-lactam	None	antibiotic inactivation
Enterococcus faecalis	vanS gene in vanB cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecalis	vanH gene in vanB cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecalis	vanR gene in vanE cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus gallinarum	vanT gene in vanC cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Escherichia coli	TolC	macrolide antibiotic;fluoroquinolone antibiotic;aminoglycoside;flucloxacillin;carbapenem	erythromycin;clarithromycin;amikacin;gentamicin;ofloxacin;meropenem	antibiotic target alteration
Pseudomonas aeruginosa	IMP1	None	None	antibiotic efflux
Enterococcus faecalis	vanW gene in vanB cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Staphylococcus cohnii	vgbB	streptogramin antibiotic;streptogramin B antibiotic	streptogramin B antibiotic	antibiotic inactivation
Enterococcus faecalis	vanT gene in vanE cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecium	vanY gene in vanD cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Staphylococcus aureus	vgbA	streptogramin antibiotic;streptogramin B antibiotic	streptogramin B antibiotic	antibiotic inactivation
Pseudomonas aeruginosa	IMP1	fluoroquinolone antibiotic;disinfectant;negronox and disinfectant	disinfectant;negronox and disinfectant	antibiotic efflux
Paenibacillus popilliae ATCC 24706	vanZ gene in vanF cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Citrobacter freundii	KHM-1	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Paenibacillus popilliae ATCC 24706	vanZ gene in vanF cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 655 ompF with mutation	multibiotacorfering resistance to tetracycline	multibiotacorfering resistance to tetracycline	antibiotic target alteration
Ureaplasma urealyticum	Ureaplasma urealyticum	fluoroquinolone resistance to fluoroquinolones	levofloxacin;target alteration	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 16S rRNA (trnB) mutation	metabolic resistance to tetracycline	tetracycline	antibiotic target alteration
Escherichia coli	MCR-1.1	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Pseudomonas aeruginosa	Pseudomonas aeruginosa	glycopeptide antibiotic	glycopeptide antibiotic	antibiotic target alteration
Acinetobacter sp. NIPH 208	OXA-289	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	IMP1	macrolide antibiotic;fluoroquinolone antibiotic;aminoglycoside;flucloxacillin;carbapenem	erythromycin;clarithromycin;amikacin;gentamicin;ofloxacin;meropenem	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 655 nfsB with mutation	multibiotacorfering resistance to furantoin	multibiotacorfering resistance to furantoin	antibiotic target alteration
Bifidobacterium bifidum P1201a	Bifidobacterium bifidum ileS protein	fluoroquinolone resistance to ciprofloxacin	ciprofloxacin	antibiotic target alteration
Staphylococcus aureus	Staphylococcus MRSA252 fusidic acid	antibiotic	antibiotic	antibiotic target alteration

Staphylococcus aureus subsp. aureus K26159	Staphylococcus K26159	fusidic acid antibiotic conferring resistance	resistance to fusidic acid	antibiotic target alteration
Enterococcus faecalis O157	Enterococcus faecalis clpP1	peptide antibiotic	resistance to daptomycin	antibiotic target alteration
Staphylococcus aureus	Staphylococcus aureus mupA	picric acid antibiotic	resistance to piperacillin	antibiotic target alteration
Staphylococcus aureus	Staphylococcus aureus mupA	picric acid antibiotic	resistance to piperacillin	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli 16S rRNA	aminoglycoside antibiotic	resistance to spectinomycin	antibiotic target alteration
Acinetobacter baumannii AB0657	Acinetobacter baumannii	ampicillin; cephalosporin	resistance to piperacillin	antibiotic inactivation
Staphylococcus aureus subsp. aureus MRSA252	Staphylococcus MRSA252	peptide antibiotic	resistance to daptomycin	antibiotic target alteration
Mycoplasma genitalium G37	Mycoplasma genitalium	fluoroquinolone antibiotic	resistance to fluoroquinolones	antibiotic target alteration
uncultured bacterium	Rm3	carbapenem; cephalosporin	resistance to penicillin beta-lactam	antibiotic inactivation
Neisseria gonorrhoeae F41093	Neisseria gonorrhoeae pili	carbapenem; cephalosporin	resistance to fluoroquinolones	antibiotic target alteration
Enterobacter ludwigii	MCR-10.4	peptide antibiotic	colistin A; colistin B	antibiotic target alteration
Enterobacter kobei	MCR-10.2	peptide antibiotic	colistin A; colistin B	antibiotic target alteration
Staphylococcus xylosus	Erm(44)v	macrolide antibiotic; lincosamide antibiotic	resistance to erythromycin; clindamycin	antibiotic target alteration
Escherichia coli str. K-12	Ynfstr. MG1655	peptide antibiotic	microcin J25	antibiotic efflux
Chlamydomonas reinhardtii	Chlamydomonas reinhardtii 16S rRNA	streptomycin	resistance to streptomycin	antibiotic target alteration
Paenibacillus sp. LC231	tetB(58)	tetracycline antibiotic	tetracycline	antibiotic efflux
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis	pyrazinamide antibiotic	resistance to pyrazinamide	antibiotic target alteration
Mycobacterium smegmatis	Mycobacterium smegmatis	isoniazid antibiotic	resistance to isoniazid	antibiotic target alteration
Klebsiella pneumoniae	KPC-2	monobactam; carbapenem	resistance to cephalosporin; penicillin beta-lactam	antibiotic inactivation
Escherichia coli str. K-12	Escherichia K12 fabI mutant	disinfecting agents and antibiotics	resistance to various antibiotics	antibiotic target alteration
Escherichia coli str. K-12	Escherichia K12 fabG mutant	disinfecting agents and antibiotics	resistance to various antibiotics	antibiotic target alteration
None	MexCD-OprJ with type A	macrolide antibiotic; fluoroquinolone antibiotic	resistance to erythromycin; ciprofloxacin	antibiotic efflux
Pseudomonas allopurida	TEM-247	monobactam; cephalosporin	resistance to piperacillin; cephalosporin	antibiotic inactivation
Pseudomonas aeruginosa	HMB-1	carbapenem	None	antibiotic inactivation
None	AcrAD-TolC	aminoglycoside antibiotic	neomycin; amikacin; kanamycin	antibiotic efflux
Escherichia coli	MCR-2.1	peptide antibiotic	colistin A; colistin B	antibiotic target alteration
Escherichia coli O157:H7	Escherichia coli mipA	fluoroquinolone antibiotic; streptogramin antibiotic	resistance to ciprofloxacin; erythromycin	antibiotic target alteration

Escherichia coli	MCR-3.1	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Streptomyces ambofaciens	Streptomyces ambofaciens mcr-3.1	macrolide antibiotic	spontaneous resistance to macrolide	antibiotic target alteration
Salmonella sp.	MCR-4.1	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Salmonella enterica subspecies I	MCR-4.1	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	pyrazinamide	confering resistance to pyrazinamide	antibiotic target alteration
Bifidobacterium adolescentis	Bifidobacterium adolescentis	macrolide antibiotic	confering resistance to rifampicin	antibiotic target alteration
Klebsiella pneumoniae	MCR-8.1	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	ethionamide	confering resistance to ethionamide	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	pyrazinamide	confering resistance to pyrazinamide	antibiotic target alteration
Mammaliococcus fleurettii	erm(45)	macrolide antibiotic;lincomycin	erythromycin;clarytromycin	antibiotic target alteration
Aeromonas	MCR-3.17	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Clostridium ljungdahlii DSM 5528	Clostridium difficile gyrB	fluoroquinolones	ciprofloxacin;levofloxacin	antibiotic target alteration
Neisseria gonorrhoeae	Neisseria gonorrhoeae mcr-1	macrolide antibiotic	erythromycin;azithromycin	antibiotic efflux
Vibrio harveyi	TxR	tetracycline antibiotic	tetracycline	antibiotic efflux
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid	confering resistance to perchlorazone	antibiotic target alteration
Mammaliococcus lentus	salB	lincosamide antibiotic;streptogramin	clindamycin;streptogramin	antibiotic target alteration
Mammaliococcus fleurettii	salC	lincosamide antibiotic;streptogramin	clindamycin;streptogramin	antibiotic target alteration
Staphylococcus gallinarum	salD	lincosamide antibiotic;streptogramin	clindamycin;streptogramin	antibiotic target alteration
Staphylococcus nepalensis	salE	lincosamide antibiotic;streptogramin	clindamycin;streptogramin	antibiotic target alteration
Enterococcus faecalis	vanTm gene in vanL cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecalis	vanY gene in vanG cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecalis	vanS gene in vanG cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Rhodococcus hoagii	vanS gene in vanO cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecium	vanXY gene in vanN cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecalis	vanS gene in vanL cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecium	vanR gene in vanM cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Enterococcus faecalis	vanU gene in vanG cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration

Enterococcus faecium	vanS gene in vanN cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecium	vanR gene in vanN cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecium	vanS gene in vanM cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Enterococcus faecalis	vanTr gene in vanL cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecalis	vanW gene in vanG cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Rhodococcus hoagii	vanR gene in vanO cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecium	vanH gene in vanM cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Enterococcus faecalis	vanXY gene in vanL cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Enterococcus faecium	vanT gene in vanN cluster	glycopeptide antibiotic	vancomycin	antibiotic target alteration
Desulfitobacterium hafniense W59	vanW gene in vanI cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Desulfitobacterium hafniense W59	vanK gene in vanI cluster	glycopeptide antibiotic	vancomycin;teicoplanin	antibiotic target alteration
Citrobacter freundii	QnrB80	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;mobifloxacin;gatifloxacin	antibiotic target alteration
Clostridioides difficile	Erm(52)	macrolide antibiotic;lincosamide antibiotic;streptogramin antibiotic	clarithromycin;streptogramin	antibiotic target alteration
Macrococcus canis	msr(G)	macrolide antibiotic;streptogramin antibiotic	erythromycin;azithromycin	antibiotic target protection
Streptococcus pyogenes	msr(I)	macrolide antibiotic;streptogramin antibiotic	erythromycin;phosphonic acid antibiotic	antibiotic target protection
Rhodococcus hoagii	Erm(51)	macrolide antibiotic;lincosamide antibiotic;streptogramin antibiotic	erythromycin;streptogramin	antibiotic target alteration
Streptococcus agalactiae	mreA	macrolide antibiotic	erythromycin;spiramycin;azithromycin	antibiotic efflux
Acinetobacter sp. CIP-A165	CEXA-290	penicillin beta-lactam	oxacillin	antibiotic inactivation
Helicobacter pylori	Helicobacter pylori gyrA	fluoroquinolone antibiotic	levofloxacin	antibiotic target alteration
Helicobacter pylori	Helicobacter pylori gyrB	fluoroquinolone antibiotic	levofloxacin;ofloxacin	antibiotic target alteration
Bacteroides fragilis	nimD	nitroimidazole antibiotic	metronidazole	antibiotic inactivation
Helicobacter pylori Hp P-30	Helicobacter pylori pbp3	cephalosporin;penicillin	amoxicillin	antibiotic target alteration
Helicobacter pylori	Helicobacter pylori pbp2	cephalosporin;penicillin	amoxicillin	antibiotic target alteration
Helicobacter pylori	Helicobacter pylori pbp1	cephalosporin;penicillin	amoxicillin	antibiotic target alteration
Helicobacter pylori 26695	Helicobacter pylori frxA	nitroimidazole antibiotic	metronidazole	antibiotic target alteration
Vibrio alginolyticus	VAM-1	carbapenem;cephalosporin	ceftriaxone;cefepime;cefotaxime	antibiotic inactivation
Cutibacterium acnes	Erm(50)	macrolide antibiotic;lincosamide antibiotic	erythromycin;azithromycin	antibiotic target alteration

Acinetobacter lwoffii	OXA-647	carbapenem;penicillin beta-lactam	ceftazidime	antibiotic inactivation
Helicobacter pylori 26695	Helicobacter pylori rpoB mutation	fluoroquinolone antibiotic	levofloxacin	antibiotic target alteration
Neisseria gonorrhoeae	Neisseria gonorrhoeae rpoD	macrolide antibiotic	azithromycin	antibiotic target alteration
Staphylococcus aureus	FosY	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Escherichia coli	MCR-1.33	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Bacillus subtilis subsp. subtilis 168	Bacillus subtilis rpoB mutation	aminoglycoside antibiotic	kanamycin	antibiotic target alteration
Saccharothrix mutabilis subsp. capreolus	Saccharothrix mutabilis subsp. capreolus	aminoglycoside antibiotic	capreomycin	antibiotic inactivation
Streptococcus pyogenes	mef(J)	macrolide antibiotic	None	antibiotic efflux
Clostridioides difficile	mef(H)	macrolide antibiotic	None	antibiotic efflux
Lactococcus garvieae	IsaD	lincosamide antibiotic;streptogramin antibiotic	clindamycin;streptogramin A;Mupirocin;teicoplanin	antibiotic inactivation
Pseudomonas wenzhouensis	KPC-1	cephalosporin;penicillin beta-lactam	cefazolin;ceftriaxone;amoxicillin;benzylpenicillin;amoxicillin-clavulanate	antibiotic inactivation
Pseudomonas aeruginosa	KPC-90	monobactam;carbapenem	ceftazidime;cefepime	antibiotic inactivation
Aeromonas caviae	KPC-83	monobactam;carbapenem	ceftazidime;cefepime	antibiotic inactivation
Bacillus massiliigabonensis	FosM1	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Gracilibacillus timonensis	FosM2	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Bacillus phocaeensis	FosM3	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Bacillus cereus VD166	BcIII	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-93	monobactam;carbapenem	ceftazidime;cefepime	antibiotic inactivation
Phocaeicola vulgatus	nimA	nitroimidazole antibiotic	metronidazole	antibiotic inactivation
Bacteroides thetaiotaomicron	nimC	nitroimidazole antibiotic	metronidazole	antibiotic inactivation
Bacteroides fragilis	nimE	nitroimidazole antibiotic	metronidazole	antibiotic inactivation
Riemerella anatipestifer RA-01	RA-01H-2	lincosamide antibiotic	lincomycin;clindamycin	antibiotic inactivation
Phocaeicola vulgatus	nimF	nitroimidazole antibiotic	metronidazole	antibiotic inactivation
Alistipes sp. An116	nimG	nitroimidazole antibiotic	metronidazole	antibiotic inactivation
Bacteroides fragilis	nimH	nitroimidazole antibiotic	metronidazole	antibiotic inactivation
Prevotella baroniae F067	nimI	nitroimidazole antibiotic	metronidazole	antibiotic inactivation
Bacteroides fragilis	nimJ	nitroimidazole antibiotic	metronidazole	antibiotic inactivation

Helicobacter pylori	Helicobacter pylori rdxA mutation	metronidazole; rifampin	metronidazole	antibiotic target alteration
Enterococcus faecium	vanH gene in vanP cluster	glycopeptide antibiotic	vancomycin; teicoplanin	antibiotic target alteration
Enterococcus faecium	vanP	glycopeptide antibiotic	vancomycin; teicoplanin	antibiotic target alteration
Enterococcus faecium	vanX gene in vanP cluster	glycopeptide antibiotic	vancomycin; teicoplanin	antibiotic target alteration
Enterococcus faecium	vanR gene in vanP cluster	glycopeptide antibiotic	vancomycin; teicoplanin	antibiotic target alteration
Enterococcus faecium	vanS gene in vanP cluster	glycopeptide antibiotic	vancomycin; teicoplanin	antibiotic target alteration
Staphylococcus aureus	AAC(6')-Ie-APH(2'')-Ia bifunctional glycopeptide	aminoglycoside antibiotic	dibekacin; amikacin; sisomicin	antibiotic inactivation
None	glycopeptide resistance gene	glycopeptide antibiotic	vancomycin; teicoplanin	antibiotic target alteration
Klebsiella aerogenes	Enterobacter aerogenes flvB	fluoroquinolone antibiotic	ciprofloxacin; ofloxacin; levofloxacin	antibiotic inactivation
Citrobacter koseri	KPC-123	monobactam; carbapenem	cefepime; ceftazidime; meropenem	antibiotic inactivation
Pseudomonas alcaligenes	PAM-1	carbapenem; cephalosporin	ceftazidime; doripenem	antibiotic inactivation
Pseudomonas tohonis	PAM-2	carbapenem; cephalosporin	ceftazidime	antibiotic inactivation
Pseudomonas tohonis	PAM-3	carbapenem; cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	NDM-16a	carbapenem; cephalosporin	None	antibiotic inactivation
Escherichia coli	NDM-16b	carbapenem; cephalosporin	None	antibiotic inactivation
Stenotrophomonas maltophilia	ADC(6')-Iap	aminoglycoside antibiotic	dibekacin; amikacin; sisomicin	antibiotic inactivation
Stenotrophomonas maltophilia	MBL1	penicillin beta-lactam	amoxicillin; piperacillin; benzylpenicillin	antibiotic inactivation
Streptomyces venezuelae	Streptomyces venezuelae rifamycin	rifamycin antibiotic	rifampin; rifaximin; rifapentine	antibiotic inactivation
Nocardia farcinica IFM 1052	Nocardia farcinica rox	rifamycin antibiotic	rifampin	antibiotic inactivation
Klebsiella pneumoniae	MCR-8.3	peptide antibiotic	colistin A; colistin B	antibiotic target alteration
Klebsiella pneumoniae	Klebsiella pneumoniae mutant R16C	carbapenem; cephalosporin; colistin	colistin; polymyxin B	antibiotic target alteration
Streptomyces venezuelae ATCC 10712	Streptomyces venezuelae ATCC 10712	rifamycin antibiotic	rifampin; rifaximin; rifabutin	antibiotic target protection
Vibrio parahaemolyticus	NDM-34	carbapenem; cephalosporin	None	antibiotic inactivation
Escherichia coli	NDM-35	carbapenem; cephalosporin	None	antibiotic inactivation
Escherichia coli	NDM-36	carbapenem; cephalosporin	None	antibiotic inactivation
Escherichia coli	NDM-37	carbapenem; cephalosporin	None	antibiotic inactivation
Providencia rettgeri	NDM-38	carbapenem; cephalosporin	None	antibiotic inactivation

Klebsiella pneumoniae	NDM-39	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Acinetobacter baumannii	NDM-40	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	NDM-41	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Acinetobacter baumannii	NDM-42	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	NDM-43	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Raoultella ornithinolytica	MCR-8.4	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Klebsiella pneumoniae	MCR-8.2	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.34	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Salmonella enterica subspecies enterica serovar Kedougou	MCR-4.16	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.27	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.18	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Salmonella enterica	MCR-1.23	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.20	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.28	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.21	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.16	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.22	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Salmonella enterica	MCR-1.19	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
uncultured bacterium	MCR-1.29	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
uncultured bacterium	MCR-1.30	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.24	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.17	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.31	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Klebsiella pneumoniae	MCR-1.14	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.25	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas jandaei	MCR-3.33	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas bivalvium	MCR-3.14	peptide antibiotic	colistin A;colistin B	antibiotic target alteration

Aeromonas veronii	MCR-3.37	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas caviae	MCR-3.38	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas media	MCR-3.15	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas	MCR-3.27	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
uncultured bacterium	MCR-3.32	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
uncultured bacterium	MCR-3.31	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Klebsiella pneumoniae	MCR-3.23	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas jandaei	MCR-3.36	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas veronii	MCR-3.25	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Klebsiella	MCR-3.22	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas	MCR-3.16	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Klebsiella pneumoniae	MCR-3.26	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Klebsiella pneumoniae	MCR-3.21	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas caviae	MCR-3.18	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Klebsiella pneumoniae	MCR-3.40	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-3.24	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-3.20	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas jandaei	MCR-3.35	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas jandaei	MCR-3.34	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Aeromonas caviae	MCR-3.13	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Klebsiella pneumoniae	MCR-3.28	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-3.39	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-3.29	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-3.19	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-5.3	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
uncultured bacterium	MCR-2.4	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-2.3	peptide antibiotic	colistin A;colistin B	antibiotic target alteration

Escherichia coli	MCR-2.8	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
uncultured bacterium	MCR-2.5	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
uncultured bacterium	MCR-2.7	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
uncultured bacterium	MCR-2.6	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Escherichia coli	MCR-1.32	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Campylobacter coli	FosXCC	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Pseudomonas aeruginosa	FosG	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Pseudomonas aeruginosa	FosH	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Mycobacteroides abscessus	Fos subsp. bolletii F1725	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Escherichia coli	FosA8	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Bacillus cereus	FosBx1	phosphonic acid antibiotic	fosfomycin	antibiotic inactivation
Pseudoxanthomonas japonensis	Pmls	carbapenem;cephalosporin	imipenem;meropenem;ceftazidime;cefepime;ceftriaxone;cefotaxime;cefepime	antibiotic inactivation
Klebsiella pneumoniae	KPC-87	monobactam;carbapenem	meropenem;imipenem;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-86	monobactam;carbapenem	meropenem;imipenem;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-95	monobactam;carbapenem	meropenem;imipenem;penicillin	antibiotic inactivation
Enterococcus faecalis	ANT(9)-Ib	aminoglycoside antibiotic	spectinomycin	antibiotic inactivation
Klebsiella pneumoniae	KPC-94	monobactam;carbapenem	meropenem;imipenem;penicillin	antibiotic inactivation
Pseudomonas sp. BF61	PFM-4	carbapenem	None	antibiotic inactivation
Escherichia coli	AAC(3)-IVa	aminoglycoside antibiotic	dibekacin;sisomicin;apramycin	antibiotic inactivation
Aliivibrio salmonicida LFI1268	QnrAS	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic target protection
Citrobacter youngae ATCC 29229	QnrB29	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic target protection
Citrobacter freundii	QnrB75	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic target protection
Citrobacter freundii	QnrB77	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic target protection
Citrobacter freundii	QnrB78	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic target protection
Aeromonas hydrophila	Mrx	macrolide antibiotic	erythromycin;tylosin;azithromycin	antibiotic inactivation
Staphylococcus aureus	kdpD	aminoglycoside antibiotic	kanamycin A	antibiotic efflux
Citrobacter portucalensis	QnrB76	fluoroquinolone antibiotic	ciprofloxacin;levofloxacin;enoxacin	antibiotic target protection

Escherichia coli	leuO	nucleoside antibiotic;disinfecting agents and antimetabolites	ferrihydrite;iron-oxalate	antibiotic efflux
Pseudomonas aeruginosa	AAC(6')-30/AAC(6')-Ib' bifunctional	aminoglycoside antibiotic	gentamicin A;gentamicin	antibiotic inactivation
Escherichia coli	AAC(6')-I33	aminoglycoside antibiotic	amikacin;tobramycin	antibiotic inactivation
Serratia marcescens	ANT(3'')-II-AAC(6')-IId bifunctional	aminoglycoside antibiotic	dibekacin;sisomicin;netilmicin;spectinomycin	antibiotic inactivation
Acinetobacter gerneri DSM 14957-X	CIP 107464 = MT069824	aminoglycoside antibiotic	amikacin;kanamycin A	antibiotic inactivation
Klebsiella pneumoniae	Klebsiella pneumoniae lab with mutations	antibiotic;cephalosporin;carbapenem;tetracycline	ceftazidime;tetracycline	antibiotic inactivation
Klebsiella pneumoniae	Klebsiella pneumoniae PBP3 mutants	penicillin;cephalosporin;ceftriaxone;cefepime;ceftazidime-avibactam	antibiotic	antibiotic target alteration
Streptococcus pyogenes	ThfT	sulfonamide antibiotic	sulfamethoxazole	resistance by host-dependent
Vibrio cholerae	almF	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Vibrio cholerae	almE	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Clostridium sp. AF37-7	cfrE	lincosamide antibiotic;streptogramin antibiotic	clindamycin;oxazolidinone	antibiotic target alteration
Stenotrophomonas maltophilia	PM1(9)-Ic	aminoglycoside antibiotic	spectinomycin	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	aminoglycoside (rS1) mutation	kanamycin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	aminoglycoside (rS1) mutation	kanamycin	antibiotic target alteration
Pseudomonas shirazica	VIM-77	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella oxytoca	VIM-79	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-81	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
None	almEFG	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
uncultured bacterium	tet(62)	tetracycline antibiotic	tetracycline	antibiotic efflux
Klebsiella pneumoniae	AAC(6')-I-43	aminoglycoside antibiotic	kanamycin A;tobramycin	antibiotic inactivation
Staphylococcus aureus	tet(63)	tetracycline antibiotic	tetracycline;doxycycline	antibiotic efflux
Burkholderia ubonensis	tet(64)	tetracycline antibiotic	tetracycline;doxycycline	antibiotic efflux
Shigella flexneri 2a str. 303	Shigella flexneri acrA	fluoroquinolone antibiotic;tigebactam	ciprofloxacin;ofloxacin;levofloxacin;erythromycin;clindamycin	antibiotic efflux
Klebsiella pneumoniae	KPC-96	monobactam;carbapenem;cephalosporin;penicillin	antibiotic	antibiotic inactivation
Empedobacter stercoris	EBR-5	carbapenem;cephalosporin;cefazidime	beta-lactam;piptacillin;amptacillin	antibiotic inactivation
Lelliottia amnigena	LAQ-1	cephalosporin;penicillin beta-lactam	cefazolin;cefazolin;cefepime;cefepime	antibiotic inactivation
Myroides albus	WUS-1	carbapenem;penicillin beta-lactam	teicoplanin;imipenem;amoxicillin	antibiotic inactivation

uncultured bacterium	SSA	cephalosporin;penicillin beta-lactam	ceftriaxone;ceftazidime;amoxicillin;ampicillin	antibiotic inactivation
Klebsiella pneumoniae	NDM-44	carbapenem;cephalosporin	None	antibiotic inactivation
Escherichia coli	NDM-45	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-100	monobactam;carbapenem	ceftriaxone;cefepime;cefazolin;penicillin	antibiotic inactivation
Escherichia coli	NDM-46	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	NDM-47	carbapenem;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-97	monobactam;carbapenem	ceftriaxone;cefepime;cefazolin;penicillin	antibiotic inactivation
Klebsiella pneumoniae	KPC-98	monobactam;carbapenem	ceftriaxone;cefepime;cefazolin;penicillin	antibiotic inactivation
Neisseria gonorrhoeae	TEM-246	monobactam;cephalosporin	cefepime;ceftriaxone;cefazolin	antibiotic inactivation
Escherichia coli	TEM-244	monobactam;cephalosporin	cefepime;ceftriaxone;cefazolin	antibiotic inactivation
Klebsiella pneumoniae	KPC-99	monobactam;carbapenem	ceftriaxone;cefepime;cefazolin;penicillin	antibiotic inactivation
Neisseria gonorrhoeae	TEM-245	monobactam;cephalosporin	cefepime;ceftriaxone;cefazolin	antibiotic inactivation
Staphylococcus aureus	dfrL	aminoglycoside antibiotic;streptomycin;erythromycin	teicoplanin;clindamycin;chloramphenicol	antibiotic inactivation
Sphingobacterium faecium	EstT	macrolide antibiotic	tilmicosin	antibiotic inactivation
Stenotrophomonas sp.	IMP-96	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-92	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-93	carbapenem;cephalosporin	None	antibiotic inactivation
Achromobacter xylosoxidans	IMP-94	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	IMP-95	carbapenem;cephalosporin	None	antibiotic inactivation
Chryseobacterium sp.	IND-17	carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-91	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	AAC(6')-I-48	aminoglycoside antibiotic	dibekacin;amikacin;sisomicin	antibiotic inactivation
Riemerella anatipestifer	RAD-1	carbapenem;cephalosporin	None	antibiotic inactivation
Pseudomonas putida	dfrB10	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Betaproteobacteria bacterium B1-HGW	Betaproteobacteria bacterium B1-HGW	diaminopyrimidine antibiotic	trimethoprim	antibiotic target replacement
Mycobacteroides abscessus	Mycobacterium abscessus	slatE with metal ion cofactor	bedaquiline	antibiotic target alteration
Pseudomonas aeruginosa	Pseudomonas aeruginosa	ampB with metal ion cofactor	aztreonam	antibiotic target alteration

Brucella intermedia	ANT(9)-Ic	aminoglycoside antibiotic	spectinomycin	antibiotic inactivation
Aeromonas veronii	MCR-3.41	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Photobacterium damsela	mef(G)	macrolide antibiotic;tetracycline antibiotic	erythromycin	antibiotic efflux
Streptococcus pneumoniae	mec(E)	macrolide antibiotic	erythromycin	antibiotic efflux
Macrococcus canis	mef(F)	macrolide antibiotic	erythromycin;azithromycin	antibiotic efflux
Bacillus subtilis subsp. subtilis	Bacillus subtilis rpsE mutant	aminoglycoside antibiotic	spectinomycin	antibiotic target alteration
Streptococcus pyogenes	Streptococcus pyogenes	beta-lactam antibiotic	cefazolin;azithromycin;clindamycin;erythromycin	antibiotic target alteration
Acinetobacter baumannii	MCR-4.7	peptide antibiotic	colistin A;colistin B	antibiotic target alteration
Erysipelothrix rhusiopathiae	Erysipelothrix rhusiopathiae	glycopeptide antibiotic	teicoplanin	antibiotic target alteration
Shewanella xiamenensis	OXA-1038	carbapenem;penicillin beta-lactam	meropenem	antibiotic inactivation
Shewanella xiamenensis	OXA-1039	carbapenem;penicillin beta-lactam	meropenem	antibiotic inactivation
Enterobacter sp. JBIWA008	KRI-11	carbapenem;penicillin beta-lactam	meropenem;imipenem	antibiotic inactivation
Klebsiella pneumoniae	KPC-125	monobactam;carbapenem	ceftazidime;ceftriaxone;cefuroxime	antibiotic inactivation
Comamonas aquatica	CAE-1	cephalosporin;penicillin beta-lactam	cefazolin;ceftriaxone;cefuroxime	antibiotic inactivation
Escherichia coli	catA1	phenicol antibiotic	azidamfenicol;chloramphenicol	antibiotic inactivation
Clostridioides difficile 630	Clostridioides difficile cpl1	Rincosamide antibiotic;streptogramin antibiotic	clindamycin;streptogramin C	antibiotic inactivation
Clostridium perfringens str. 13	Clostridium perfringens cpl1	Rincosamide antibiotic;streptogramin antibiotic	clindamycin;streptogramin C	antibiotic inactivation
Clostridium sporogenes	Clostridium sporogenes cpl1	Rincosamide antibiotic;antibiotic	clindamycin;teicoplanin	antibiotic inactivation
Pantoea sp.	PSZ-1	cephalosporin;penicillin beta-lactam	cefazolin;ceftriaxone;amoxicillin	antibiotic inactivation
Cedecea davisae	CDA-1	carbapenem;cephalosporin	meropenem;ceftriaxone	antibiotic inactivation
Trueperella pyogenes	erm(56)	macrolide antibiotic;lincosamide antibiotic	erythromycin;clindamycin	antibiotic inactivation
Staphylococcus aureus	VRA-F	glycopeptide antibiotic	vancomycin	antibiotic efflux
Sphingobium indicum B903	CAE-1	carbapenem;cephalosporin	meropenem	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	spoT	fluoroquinolone antibiotic	levofloxacin;ofloxacin	antibiotic efflux
Mycobacterium tuberculosis H37Rv	spoT	fluoroquinolone antibiotic	levofloxacin;ofloxacin	antibiotic efflux
Mycobacterium tuberculosis H37Rv	spoT	fluoroquinolone antibiotic	levofloxacin;ofloxacin	antibiotic efflux
Pseudomonas aeruginosa	IM-76	carbapenem;cephalosporin	meropenem	antibiotic inactivation

Proteus mirabilis	VIM-78	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-80	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-82	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	VIM-83	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-84	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Acinetobacter baumannii	aadT	macrolide antibiotic;tetracycline antibiotic;tetracycline antibiotic	chloramphenicol;high level antiseptics	
Clostridioides difficile R2001	Clostridioides difficile nimB	imidazole antibiotic	metronidazole	antibiotic inactivation
uncultured bacterium	RSA1-1	carbapenem;cephalosporin	None	antibiotic inactivation
Enterococcus faecalis	IreK	cephalosporin	ceftriaxone	reduced permeability to antibiotics
Acinetobacter baumannii	OXA-481	penicillin beta-lactam	oxacillin	antibiotic inactivation
Salmonella enterica subspecies I serovar Panama	TEM-103	monobactam;cephalosporin	ampicillin;penicillin	antibiotic inactivation
Serratia marcescens	TEM-61	monobactam;cephalosporin	cefazidime;beta-lactam antibiotic	antibiotic inactivation
Klebsiella pneumoniae	OKP-B-14	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Acinetobacter radioresistens	OXA-105	penicillin beta-lactam	oxacillin	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin	bedaquiline	resistance to bedaquiline target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	isoniazid	bedaquiline	resistance to bedaquiline target alteration
Achromobacter mucicola	AMZ-1	cephalosporin;penicillin beta-lactam	ceftriaxone;amoxicillin;benzylpenicillin;ampicillin	antibiotic inactivation
Escherichia coli	CMY-185	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	NWM-1	carbapenem	None	antibiotic inactivation
Salmonella enterica subspecies I serovar Gallinarum	Sa1204	fluoroquinolone antibiotic	ceftriaxone;ceftazidime	antibiotic target alteration
Salmonella enterica subspecies I serovar Agona	Sa1204	fluoroquinolone antibiotic	ceftriaxone;ceftazidime	antibiotic target alteration
Salmonella enterica subspecies I serovar Agona	Sa1204	fluoroquinolone antibiotic	ceftriaxone;ceftazidime	antibiotic target alteration
Klebsiella pneumoniae	MdtQ	monobactam;carbapenem	cephalosporin;penicillin beta-lactam	reduced permeability to antibiotics
Treponema pallidum subspecies pallidum	Treponema pallidum 23S	RNA polymerase inhibition	erythromycin	antibiotic target alteration
Escherichia coli	aac(6')-Ib-cr10	fluoroquinolone antibiotic	amikacin;glycoside antibiotic	antibiotic inactivation
Proteus mirabilis	aac(6')-Ib-cr11	fluoroquinolone antibiotic	amikacin;glycoside antibiotic	antibiotic inactivation
Vibrio vulnificus CMCP6	Vibrio vulnificus rpoB mutation	aminoglycoside	kanamycin	antibiotic target alteration

Acinetobacter baumannii	OXA-410	penicillin beta-lactam	oxacillin	antibiotic inactivation
Salmonella enterica subsp. Enterica serovar Typhi	TEM-518	penicillin beta-lactam;cephalosporins	cefepime;ceftriaxone;cefotaxime;cefazolin	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	MybH37Rv	isoniazid	isoniazid	antibiotic target alteration
Riemerella anatipestifer	RATA-1	carbapenem	None	antibiotic inactivation
Riemerella anatipestifer	RATA-2	carbapenem	None	antibiotic inactivation
Neisseria gonorrhoeae F1090	Neisseria gonorrhoeae gNA	with polymyxins antibiotic	colistin	antibiotic target alteration
Vibrio alginolyticus	CARB-56	penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	VIM-74	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Proteus mirabilis	VIM-75	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-85	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Providencia stuartii	VIM-86	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-87	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Klebsiella michiganensis	GES-47	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Aeromonas caviae	GES-48	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Aeromonas veronii bv. veronii	GES-49	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Klebsiella michiganensis	GES-50	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Citrobacter portucalensis	GES-51	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	GES-52	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	GES-53	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Enterobacter kobei	GES-54	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Serratia marcescens	GES-55	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Acinetobacter baumannii	GES-56	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	GES-57	carbapenem;cephalosporins	penicillin beta-lactam	antibiotic inactivation
Vibrio diabolicus	CARB-57	penicillin beta-lactam	None	antibiotic inactivation
Salmonella enterica subsp. Enterica serovar Schwarzengrund	CARB-58	penicillin beta-lactam	None	antibiotic inactivation
Corynebacterium sp. 22K140(43)	CM43	tetracycline antibiotic	tetracycline	antibiotic efflux
Chryseobacterium indologenes	CM44	carbapenem;cephalosporins	None	antibiotic inactivation

Klebsiella pneumoniae	KPC-135	monobactam;carbapenem	None	antibiotic inactivation
Mycobacterium tuberculosis	My H37Rv	streptomycin	resistance to clarithromycin	clarithromycin target alteration
Mycobacterium tuberculosis	My H37Rv	streptomycin	resistance to bedaquiline	bedaquiline target alteration
Klebsiella pneumoniae	KPC-134	monobactam;carbapenem	ceftriaxone;penicillin	antibiotic inactivation
Pseudomonas putida	BIM-1	carbapenem;cephalosporin	None	antibiotic inactivation
Chryseobacterium sp.	CHM-1	carbapenem;cephalosporin	None	antibiotic inactivation
Dysgonomonas capnocytophaga	DYB-1	carbapenem;cephalosporin	ceftazidime;meropenem	antibiotic inactivation
Enterobacter cloacae	ACT-100	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	ACT-101	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	ACT-102	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	ACT-103	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	ACT-104	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter asburiae	ACT-105	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Proteus mirabilis	ACT-106	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter huaxiensis	ACT-107	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	ACT-108	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter ludwigii	ACT-109	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter kobei	ACT-110	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter quasirogersii	ACT-111	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter ludwigii	ACT-112	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	ACT-113	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-115	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	ACT-116	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	ACT-117	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	ACT-118	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	ACT-119	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-120	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation

Enterobacter hormaechei	ACT-121	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-122	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-123	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-124	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter ludwigii	ACT-131	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter bugandensis	ACT-140	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-141	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter kobei	ACT-142	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter sp.	ACT-143	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-144	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter sp.	ACT-145	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter bugandensis	ACT-146	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-148	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	ACT-150	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-151	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter bugandensis	ACT-153	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter kobei	ACT-154	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-155	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter mori	ACT-156	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-157	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-158	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	ACT-159	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter bugandensis	ACT-160	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter kobei	ACT-161	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter kobei	ACT-162	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter bugandensis	ACT-165	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Enterobacter ludwigii	ACT-166	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation

Enterobacter sp.	ACT-167	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter quasirogersii	ACT-168	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter kobei	ACT-169	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter bugandensis	ACT-170	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-171	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter bugandensis	ACT-172	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter sp.	ACT-173	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-174	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter bugandensis	ACT-175	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter sichuanensis	ACT-176	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter asburiae	ACT-177	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-178	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-179	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter sichuanensis	ACT-180	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter kobei	ACT-181	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter asburiae	ACT-182	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-183	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-184	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter kobei	ACT-185	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-186	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter quasirogersii	ACT-187	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter bugandensis	ACT-188	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-189	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter kobei	ACT-190	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-191	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter hormaechei	ACT-192	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation
Enterobacter sichuanensis	ACT-193	carbapenem;cephalosporin	Nicotinicillin beta-lactam	antibiotic inactivation

Enterobacter hormaechei	ACT-194	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter hormaechei	ACT-85	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter hormaechei	ACT-86	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter ludwigii	ACT-88	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter hormaechei	ACT-89	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter hormaechei	ACT-90	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-91	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-92	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-93	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-94	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-95	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-96	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-97	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-98	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-99	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	ACT-GC1	carbapenem;cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-257	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-258	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-259	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-260	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-261	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-262	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-263	cephalosporin	None	antibiotic inactivation
Acinetobacter calcoaceticus	ADC-264	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-265	cephalosporin	None	antibiotic inactivation
Acinetobacter nosocomialis	ADC-266	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-267	cephalosporin	None	antibiotic inactivation

Acinetobacter baumannii	ADC-268	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-269	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-270	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-271	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-272	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-273	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-274	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-275	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-276	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-277	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-278	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-279	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-280	cephalosporin	None	antibiotic inactivation
Acinetobacter lactucae	ADC-281	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-282	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-283	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-284	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-285	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-286	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-287	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-288	cephalosporin	None	antibiotic inactivation
Acinetobacter nosocomialis	ADC-289	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-290	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-291	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-292	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-293	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-294	cephalosporin	None	antibiotic inactivation

Acinetobacter sp.	ADC-295	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-302	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-303	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-304	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-305	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-306	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-307	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-308	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-309	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-310	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-311	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-312	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-313	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-314	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-315	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-316	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-317	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-318	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-319	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-320	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-321	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-322	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-323	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-324	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-325	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-326	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-327	cephalosporin	None	antibiotic inactivation

Acinetobacter baumannii	ADC-328	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-329	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-330	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-331	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-332	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-333	cephalosporin	None	antibiotic inactivation
Acinetobacter nosocomialis	ADC-334	cephalosporin	None	antibiotic inactivation
Acinetobacter seifertii	ADC-335	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-336	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-337	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-338	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-339	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-340	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-341	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-342	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-343	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-344	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-345	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-346	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-347	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-348	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-349	cephalosporin	None	antibiotic inactivation
Acinetobacter nosocomialis	ADC-350	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-351	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-352	cephalosporin	None	antibiotic inactivation
Acinetobacter sp.	ADC-353	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-354	cephalosporin	None	antibiotic inactivation

Acinetobacter baumannii	ADC-355	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-356	cephalosporin	None	antibiotic inactivation
Acinetobacter pittii	ADC-357	cephalosporin	None	antibiotic inactivation
Acinetobacter nosocomialis	ADC-358	cephalosporin	None	antibiotic inactivation
Acinetobacter baumannii	ADC-359	cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	AFM-3	carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	AFM-4	carbapenem	None	antibiotic inactivation
Pseudomonas guariconensis	AFM-5	carbapenem	None	antibiotic inactivation
uncultured bacterium	AIM-2	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
uncultured bacterium	ASU1-1	cephalosporin	None	antibiotic inactivation
Achromobacter ruhlandii	AXC-6	carbapenem	None	antibiotic inactivation
Achromobacter xylosoxidans	AXC-7	carbapenem	None	antibiotic inactivation
Achromobacter ruhlandii	AXC-8	carbapenem	None	antibiotic inactivation
uncultured bacterium	B3SU1-1	cephalosporin	None	antibiotic inactivation
uncultured bacterium	B3SU2-1	cephalosporin	None	antibiotic inactivation
Pseudomonas fluorescens	BIC-2	carbapenem	None	antibiotic inactivation
Riemerella anatipestifer	BMHC-1	carbapenem	None	antibiotic inactivation
Bordetella bronchiseptica	BOR-1	penicillin beta-lactam	None	antibiotic inactivation
Pyrinomonadaceae	CAM-2	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia anophelis	CME-3	penicillin beta-lactam	None	antibiotic inactivation
Enterobacter cloacae	CMH-10	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-11	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-12	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-13	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-14	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-15	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-16	cephalosporin	None	antibiotic inactivation

Enterobacter cloacae	CMH-17	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-18	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-19	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-20	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-21	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-24	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-25	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-29	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-30	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-31	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-32	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-33	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-34	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-7	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-8	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-9	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CMY-172	cephalosporin	None	antibiotic inactivation
Citrobacter portucalensis	CMY-175	cephalosporin	None	antibiotic inactivation
Citrobacter portucalensis	CMY-176	cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	CMY-177	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-178	cephalosporin	None	antibiotic inactivation
Citrobacter meridianame	CMY-179	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-180	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-181	cephalosporin	None	antibiotic inactivation
Citrobacter braakii	CMY-182	cephalosporin	None	antibiotic inactivation
Citrobacter portucalensis	CMY-183	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-184	cephalosporin	None	antibiotic inactivation

Klebsiella pneumoniae	CMY-186	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-188	cephalosporin	None	antibiotic inactivation
Citrobacter freundii	CMY-189	cephalosporin	None	antibiotic inactivation
Citrobacter youngae	CMY-190	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-191	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-28	cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	CMH-27	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-192	cephalosporin	None	antibiotic inactivation
Providencia stuartii	CMY-194	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-195	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-196	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-197	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-198	cephalosporin	None	antibiotic inactivation
Escherichia coli	CMY-199	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-243	cephalosporin	None	antibiotic inactivation
Serratia marcescens	CTX-M-245	cephalosporin	None	antibiotic inactivation
Kluyvera intermedia	CTX-M-246	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-247	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-248	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-249	cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	CTX-M-251	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-252	cephalosporin	None	antibiotic inactivation
Providencia rettgeri	CTX-M-253	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-254	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-255	cephalosporin	None	antibiotic inactivation
Enterobacter hormaechei	CTX-M-256	cephalosporin	None	antibiotic inactivation
Enterobacter hormaechei	CTX-M-257	cephalosporin	None	antibiotic inactivation

Enterobacter hormaechei	CTX-M-258	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-259	cephalosporin	None	antibiotic inactivation
Salmonella enterica	CTX-M-261	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-262	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-263	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-264	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-265	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-266	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-267	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-268	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-269	cephalosporin	None	antibiotic inactivation
Kluyvera ascorbata	CTX-M-270	cephalosporin	None	antibiotic inactivation
Shigella flexneri	CTX-M-271	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-272	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	CTX-M-273	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-274	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-275	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-276	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-277	cephalosporin	None	antibiotic inactivation
Escherichia coli	CTX-M-278	cephalosporin	None	antibiotic inactivation
Morganella morganii	DHA-30	cephalosporin	None	antibiotic inactivation
Morganella morganii	DHA-31	cephalosporin	None	antibiotic inactivation
Morganella morganii	DHA-32	cephalosporin	None	antibiotic inactivation
Escherichia coli	DHA-33	cephalosporin	None	antibiotic inactivation
Escherichia coli	DHA-34	cephalosporin	None	antibiotic inactivation
Serratia fonticola	FONA-10	penicillin beta-lactam	None	antibiotic inactivation
Serratia fonticola	FONA-11	penicillin beta-lactam	None	antibiotic inactivation

Serratia fonticola	FONA-12	penicillin beta-lactam	None	antibiotic inactivation
Serratia fonticola	FONA-13	penicillin beta-lactam	None	antibiotic inactivation
Serratia fonticola	FONA-7	penicillin beta-lactam	None	antibiotic inactivation
Serratia fonticola	FONA-8	penicillin beta-lactam	None	antibiotic inactivation
Serratia fonticola	FONA-9	penicillin beta-lactam	None	antibiotic inactivation
Aeromonas allosaccharophila	FOX-18	cephalosporin	None	antibiotic inactivation
Aeromonas allosaccharophila	FOX-19	cephalosporin	None	antibiotic inactivation
Enterobacter hormaechei	FOX-20	cephalosporin	None	antibiotic inactivation
Aeromonas allosaccharophila	FOX-21	cephalosporin	None	antibiotic inactivation
Enterobacter asburiae	FRI-12	penicillin beta-lactam	None	antibiotic inactivation
Enterobacter asburiae	GES-58	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	GES-59	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	GES-60	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Aeromonas caviae	GES-61	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	GES-62	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	GES-65	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	GES-66	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Serratia marcescens	GIM-3	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Vibrio parahaemolyticus	GMA-1	penicillin beta-lactam	None	antibiotic inactivation
Vibrio fortis	GMA-2	penicillin beta-lactam	None	antibiotic inactivation
Elizabethkingia meningoseptica	GOB-17	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Elizabethkingia meningoseptica	GOB-47	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Elizabethkingia anophelis	GOB-52	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Elizabethkingia anophelis	GOB-53	carbapenem;cephalosporin	None;penicillin beta-lactam	antibiotic inactivation
Bordetella hinzii	HBL-1	penicillin beta-lactam	None	antibiotic inactivation
Atlantibacter hermannii	HER-1	penicillin beta-lactam	None	antibiotic inactivation
Atlantibacter hermannii	HER-2	penicillin beta-lactam	None	antibiotic inactivation

Atlantibacter hermannii	HER-3	penicillin beta-lactam	None	antibiotic inactivation
Atlantibacter hermannii	HER-4	penicillin beta-lactam	None	antibiotic inactivation
Atlantibacter hermannii	HER-5	penicillin beta-lactam	None	antibiotic inactivation
Atlantibacter hermannii	HER-6	penicillin beta-lactam	None	antibiotic inactivation
Atlantibacter hermannii	HER-8	penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	HMB-2	carbapenem	None	antibiotic inactivation
Enterobacter asburiae	IMI-10	carbapenem	None	antibiotic inactivation
Serratia ureilytica	IMI-22	carbapenem	None	antibiotic inactivation
Serratia ureilytica	IMI-23	carbapenem	None	antibiotic inactivation
Enterobacter asburiae	IMI-24	carbapenem	None	antibiotic inactivation
Enterobacter cloacae	IMI-25	carbapenem	None	antibiotic inactivation
Enterobacter cloacae	IMI-26	carbapenem	None	antibiotic inactivation
Enterobacter cloacae	IMI-27	carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-100	carbapenem;cephalosporins	None	antibiotic inactivation
Pseudomonas alcaligenes	IMP-101	carbapenem;cephalosporins	None	antibiotic inactivation
Pseudomonas asiatica	IMP-102	carbapenem;cephalosporins	None	antibiotic inactivation
Pseudomonas allopuntidis	IMP-104	carbapenem;cephalosporins	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-105	carbapenem;cephalosporins	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-86	carbapenem;cephalosporins	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-87	carbapenem;cephalosporins	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-90	carbapenem;cephalosporins	None	antibiotic inactivation
Klebsiella oxytoca	IMP-97	carbapenem;cephalosporins	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-98	carbapenem;cephalosporins	None	antibiotic inactivation
Pseudomonas aeruginosa	IMP-99	carbapenem;cephalosporins	None	antibiotic inactivation
Chryseobacterium indologenes	IMP-118	carbapenem	None	antibiotic inactivation
Chryseobacterium indologenes	IMP-119	carbapenem	None	antibiotic inactivation
Pseudomonas mosselii	KHM-2	carbapenem;cephalosporins	None	antibiotic inactivation

Kluyvera cryocrescens	KLUC-6	cephalosporin	None	antibiotic inactivation
Kluyvera georgiana	KLUG-1	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-101	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-102	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-103	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-104	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-105	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-106	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-107	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-108	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-109	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-110	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-111	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-112	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-113	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-114	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-115	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-116	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-117	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-118	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-119	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Pseudomonas aeruginosa	KPC-120	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Enterobacter cloacae	KPC-121	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Enterobacter cloacae	KPC-122	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-124	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-126	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-127	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation

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Klebsiella pneumoniae	KPC-184	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-185	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-186	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-187	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-188	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-189	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-190	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-191	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-192	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-193	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-194	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-195	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-196	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-197	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Pseudomonas aeruginosa	KPC-201	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-202	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-203	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-204	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-205	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Enterobacter cloacae	KPC-206	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-207	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-208	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Pseudomonas aeruginosa	KPC-209	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-211	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-212	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-213	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation
Klebsiella pneumoniae	KPC-214	monobactam;carbapenem;cephalosporin;penicillin	beta-lactam activation

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Klebsiella pneumoniae	KPC-69	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-70	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-84	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-85	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-88	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-89	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-91	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Klebsiella pneumoniae	KPC-92	monobactam;carbapenem;cephalosporin;penicillin	None	antibiotic inactivation
Laribacter hongkongensis	LHK-7	carbapenem;cephalosporin	None	antibiotic inactivation
Enterobacter roggenkampii	MIR-24	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter roggenkampii	MIR-25	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter roggenkampii	MIR-27	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter roggenkampii	MIR-28	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter roggenkampii	MIR-30	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter roggenkampii	MIR-31	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter roggenkampii	MIR-32	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter roggenkampii	MIR-33	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter roggenkampii	MIR-34	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter roggenkampii	MIR-35	monobactam;cephalosporin	None	antibiotic inactivation
Aeromonas caviae	MOX-15	cephalosporin;penicillin	monobactam	antibiotic inactivation
Aeromonas caviae	MOX-16	cephalosporin;penicillin	monobactam	antibiotic inactivation
Aeromonas caviae	MOX-17	cephalosporin;penicillin	monobactam	antibiotic inactivation
Aeromonas caviae	MOX-18	cephalosporin;penicillin	monobactam	antibiotic inactivation
Aeromonas caviae	MOX-19	cephalosporin;penicillin	monobactam	antibiotic inactivation
Aeromonas caviae	MOX-20	cephalosporin;penicillin	monobactam	antibiotic inactivation
Aeromonas caviae	MOX-21	cephalosporin;penicillin	monobactam	antibiotic inactivation
Aeromonas caviae	MOX-22	cephalosporin;penicillin	monobactam	antibiotic inactivation

Aeromonas caviae	MOX-23	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Aeromonas caviae	MOX-24	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Aeromonas caviae	MOX-25	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	MUN-1	cephalosporin	None	antibiotic inactivation
Parabacteroides distasonii	MUN-6	cephalosporin	None	antibiotic inactivation
Escherichia coli	NDM-48	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-49	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	NDM-50	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-51	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	NDM-52	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-53	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	NDM-54	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-55	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-56	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-57	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	NDM-58	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-60	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	NDM-61	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	NDM-64	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Enterobacter cloacae	NDM-65	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-66	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-67	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-68	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	NDM-69	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	NDM-70	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	NDM-71	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	NDM-72	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation

Klebsiella pneumoniae	NDM-73	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Escherichia coli	NDM-74	carbapenem;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Acinetobacter pittii	OXA-1000	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter bereziniae	OXA-1001	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-1002	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter oleivorans	OXA-1003	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter courvalinii	OXA-1004	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter schindleri	OXA-1005	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter johnsonii	OXA-1006	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter oleivorans	OXA-1007	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter lactucae	OXA-1008	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-1009	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter lactucae	OXA-1010	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Citrobacter freundii	OXA-1012	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1013	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1014	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas indologaster	OXA-1015	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella michiganensis	OXA-1011	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas indologaster	OXA-1016	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Enterobacter cloacae	OXA-1017	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1018	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1019	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1020	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1021	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1022	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1023	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1024	penicillin beta-lactam	oxacillin	antibiotic inactivation

Pseudomonas aeruginosa	OXA-1025	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1026	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1027	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1028	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1029	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1030	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1031	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1032	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1033	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1034	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1035	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter sp.	OXA-1036	penicillin beta-lactam	oxacillin	antibiotic inactivation
Aeromonas caviae	OXA-1037	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1040	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Citrobacter freundii	OXA-1041	penicillin beta-lactam	oxacillin	antibiotic inactivation
Aeromonas veronii	OXA-1042	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Burkholderia cenocepacia	OXA-1043	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter johnsonii	OXA-1044	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-1045	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1046	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1047	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1048	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1049	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-1050	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-1051	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter bereziniae	OXA-1052	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Aeromonas hydrophila	OXA-1053	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation

Klebsiella pneumoniae	OXA-1055	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1056	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Pseudomonas oleovorans	OXA-1057	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1058	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1059	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1060	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1061	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1062	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1063	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1064	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1065	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1066	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1067	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1068	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1069	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1070	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1071	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1072	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1073	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1074	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1075	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1076	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1077	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1078	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1079	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter baumannii	OXA-1080	carbapenem;penicillin beta-lactamase	antibiotic inactivation
Acinetobacter bereziniae	OXA-1081	carbapenem;penicillin beta-lactamase	antibiotic inactivation

<i>Pseudomonas aeruginosa</i>	OXA-1082	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
<i>Klebsiella pneumoniae</i>	OXA-1083	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	OXA-1084	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	OXA-1085	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	OXA-1086	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	OXA-1087	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	OXA-1088	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
<i>Longilinea arvoryzae</i>	OXA-1089	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Hyphomonas beringensis</i>	OXA-1090	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Bradyrhizobium</i> sp.	OXA-1091	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Acinetobacter baumannii</i>	OXA-1092	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Acinetobacter baumannii</i>	OXA-1093	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Acinetobacter baumannii</i>	OXA-1094	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Klebsiella pneumoniae</i>	OXA-1095	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Acinetobacter baumannii</i>	OXA-1096	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Acinetobacter baumannii</i>	OXA-1097	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Acinetobacter baumannii</i>	OXA-1098	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Brachyspira pilosicoli</i>	OXA-1099	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Brachyspira pilosicoli</i>	OXA-1100	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Brachyspira pilosicoli</i>	OXA-1101	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Brachyspira pulli</i>	OXA-1102	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Brachyspira pulli</i>	OXA-1103	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Brachyspira pulli</i>	OXA-1104	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Brachyspira pulli</i>	OXA-1105	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Brachyspira pulli</i>	OXA-1106	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Brachyspira pulli</i>	OXA-1107	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Aliarcobacter butzleri</i>	OXA-1108	penicillin beta-lactam	oxacillin	antibiotic inactivation

Acinetobacter baumannii	OXA-1109	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter lwoffii	OXA-1110	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter lwoffii	OXA-1111	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter lwoffii	OXA-1112	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-1113	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-1114	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-1115	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter schindleri	OXA-1116	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1117	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1118	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Escherichia coli	OXA-1119	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Enterobacter cloacae	OXA-1120	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1121	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1122	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1123	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1124	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1125	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1126	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1127	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1128	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1129	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1130	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1131	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1132	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1133	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1134	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1135	penicillin beta-lactam	oxacillin	antibiotic inactivation

<i>Pseudomonas aeruginosa</i>	OXA-1136	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
<i>Acinetobacter lactucae</i>	OXA-1137	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Acinetobacter pittii</i>	OXA-1138	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Acinetobacter baumannii</i>	OXA-1139	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	OXA-1140	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Pseudomonas parasichuensis</i>	OXA-1141	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
<i>Burkholderia cenocepacia</i>	OXA-1142	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Aeromonas caviae</i>	OXA-1143	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Acinetobacter bereziniae</i>	OXA-1144	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Acinetobacter proteolyticus</i>	OXA-1145	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Klebsiella oxytoca</i>	OXA-1146	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Providencia rettgeri</i>	OXA-1147	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
<i>Pseudomonas aeruginosa</i>	OXA-1148	cephalosporin;penicillin beta-lactam	ceftazidime	antibiotic inactivation
<i>Pandoraea commovens</i>	OXA-1149	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Acinetobacter pittii</i>	OXA-1150	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Acinetobacter calcoaceticus</i>	OXA-1151	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Pandoraea sputorum</i>	OXA-1152	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
<i>Aeromonas taiwanensis</i>	OXA-1153	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Aeromonas caviae</i>	OXA-1154	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Aeromonas caviae</i>	OXA-1155	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Aeromonas caviae</i>	OXA-1156	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Aeromonas veronii</i>	OXA-1157	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Aeromonas caviae</i>	OXA-1158	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Aeromonas caviae</i>	OXA-1159	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Aeromonas caviae</i>	OXA-1160	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Aeromonas caviae</i>	OXA-1161	penicillin beta-lactam	oxacillin	antibiotic inactivation
<i>Aeromonas veronii</i>	OXA-1162	penicillin beta-lactam	oxacillin	antibiotic inactivation

Aeromonas caviae	OXA-1163	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-1164	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter pittii	OXA-1165	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter pittii	OXA-1166	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-1167	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1168	cephalosporin;penicillin beta-lactam	etacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1169	cephalosporin;penicillin beta-lactam	etacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1170	cephalosporin;penicillin beta-lactam	etacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1171	cephalosporin;penicillin beta-lactam	etacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1172	cephalosporin;penicillin beta-lactam	etacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1173	cephalosporin;penicillin beta-lactam	etacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1174	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1175	cephalosporin;penicillin beta-lactam	etacillin	antibiotic inactivation
Ralstonia mannitolilytica	OXA-1176	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Ralstonia mannitolilytica	OXA-1177	cephalosporin;penicillin beta-lactam	etacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1178	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Escherichia coli	OXA-1181	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1182	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1183	cephalosporin;penicillin beta-lactam	etacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1184	cephalosporin;penicillin beta-lactam	etacillin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-1185	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Citrobacter freundii	OXA-1186	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1187	cephalosporin;penicillin beta-lactam	etacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1188	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter sp.	OXA-1189	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter bereziniae	OXA-1190	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation
Acinetobacter bereziniae	OXA-1191	carbapenem;penicillin beta-lactam	texacillin	antibiotic inactivation

Acinetobacter bereziniae	OXA-1193	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter bereziniae	OXA-1194	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1198	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1199	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-1200	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-1201	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1202	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1203	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1204	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Escherichia coli	OXA-1205	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Cupriavidus taiwanensis	OXA-1206	penicillin beta-lactam	oxacillin	antibiotic inactivation
Escherichia coli	OXA-1207	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter sp.	OXA-1208	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-1211	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-1212	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Escherichia coli	OXA-1213	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1214	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter proteolyticus	OXA-1215	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1216	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-1217	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1218	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1219	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1220	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter radioresistens	OXA-1221	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-1222	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1223	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-1224	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation

Acinetobacter bereziniae	OXA-1225	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Escherichia coli	OXA-1226	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pandoraea sputorum	OXA-1227	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pandoraea sputorum	OXA-1228	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1229	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1230	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1231	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1232	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas oleovorans	OXA-1233	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter sp.	OXA-1234	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-1235	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter variabilis	OXA-1236	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-1237	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter sp.	OXA-1238	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1239	penicillin beta-lactam	oxacillin	antibiotic inactivation
Providencia stuartii	OXA-1240	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1241	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-1242	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella sp.	OXA-1243	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1244	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1245	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1246	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1247	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1248	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1249	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1250	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter ruhlandii	OXA-1251	penicillin beta-lactam	oxacillin	antibiotic inactivation

Pseudomonas aeruginosa	OXA-1252	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1253	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1254	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1255	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1256	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1257	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter sp.	OXA-1258	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter faecalis	OXA-1259	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter faecalis	OXA-1260	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter faecalis	OXA-1261	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter faecalis	OXA-1262	carbapenem;cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter faecalis	OXA-1263	carbapenem;cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pandoraea apista	OXA-1264	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1265	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-1266	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1267	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1268	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1269	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1270	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1271	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1272	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1273	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1274	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1275	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1276	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1277	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1278	penicillin beta-lactam	oxacillin	antibiotic inactivation

Pseudomonas aeruginosa	OXA-1279	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1280	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1281	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1282	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1283	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1284	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1285	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1286	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1287	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1288	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1289	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1290	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1291	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1292	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1293	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1294	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1295	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1296	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1297	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1298	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1299	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1300	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas aeruginosa	OXA-1301	penicillin beta-lactam	oxacillin	antibiotic inactivation
Pseudomonas soli	OXA-1302	cephalosporin;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-1303	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Escherichia coli	OXA-1304	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-1305	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation

Klebsiella pneumoniae	OXA-1306	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-1307	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-1308	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-1309	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Aeromonas sobria	OXA-725	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-790	penicillin beta-lactam	oxacillin	antibiotic inactivation
Achromobacter xylosoxidans	OXA-791	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella pneumoniae	OXA-933	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella aerogenes	OXA-934	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter haemolyticus	OXA-936	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter guillouiae	OXA-944	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Aeromonas hydrophila	OXA-950	penicillin beta-lactam	oxacillin	antibiotic inactivation
Aeromonas dhakensis	OXA-951	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter bereziniae	OXA-952	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter bereziniae	OXA-953	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-954	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-955	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Aeromonas salmonicida	OXA-956	penicillin beta-lactam	oxacillin	antibiotic inactivation
uncultured bacterium	OXA-957	penicillin beta-lactam	oxacillin	antibiotic inactivation
Aeromonas allosaccharophila	OXA-958	penicillin beta-lactam	oxacillin	antibiotic inactivation
Aeromonas allosaccharophila	OXA-959	penicillin beta-lactam	oxacillin	antibiotic inactivation
Shewanella chilikensis	OXA-960	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Shewanella chilikensis	OXA-961	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Shewanella indica	OXA-962	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Shewanella algae	OXA-963	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Shewanella algae	OXA-964	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Shewanella algae	OXA-965	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation

Acinetobacter radioresistens	OXA-966	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter radioresistens	OXA-967	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter radioresistens	OXA-968	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter radioresistens	OXA-969	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-970	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-971	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-972	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-973	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-974	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-975	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-976	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter baumannii	OXA-977	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-978	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter lactucae	OXA-979	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter lactucae	OXA-980	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter gernerii	OXA-981	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter vivianii	OXA-982	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter bereziniae	OXA-983	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter courvalinii	OXA-984	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter lactucae	OXA-985	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-986	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter oleivorans	OXA-987	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-988	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter lactucae	OXA-989	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter calcoaceticus	OXA-990	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter schindleri	OXA-991	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter pittii	OXA-992	carbapenem;penicillin beta-lactam	oxacillin	antibiotic inactivation

Acinetobacter vivianii	OXA-993	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter vivianii	OXA-994	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter courvalinii	OXA-995	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter courvalinii	OXA-996	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter vivianii	OXA-997	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter courvalinii	OXA-998	penicillin beta-lactam	oxacillin	antibiotic inactivation
Acinetobacter gernerii	OXA-999	penicillin beta-lactam	oxacillin	antibiotic inactivation
Klebsiella oxytoca	OXY-1-11	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella michiganensis	OXY-1-12	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella michiganensis	OXY-1-13	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella michiganensis	OXY-1-16	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella michiganensis	OXY-1-17	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella michiganensis	OXY-1-18	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella michiganensis	OXY-1-19	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-10-1	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-11-1	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella sp.	OXY-12-1	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella sp.	OXY-12-2	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-17	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-18	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-19	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-20	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-21	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-22	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-23	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-24	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella oxytoca	OXY-2-25	monobactam;cephalosporin	None	antibiotic inactivation

Klebsiella oxytoca	OXY-2-26	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella oxytoca	OXY-2-27	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella oxytoca	OXY-2-28	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella oxytoca	OXY-2-30	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella spallanzanii	OXY-3-2	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella spallanzanii	OXY-3-3	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella pasteurii	OXY-4-2	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella pasteurii	OXY-4-3	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella pasteurii	OXY-4-4	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella pasteurii	OXY-4-5	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella michiganensis	OXY-5-10	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella michiganensis	OXY-5-11	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella michiganensis	OXY-5-6	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella michiganensis	OXY-5-7	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella michiganensis	OXY-5-8	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella grimontii	OXY-6-10	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella grimontii	OXY-6-11	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella grimontii	OXY-6-5	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella grimontii	OXY-6-7	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella oxytoca	OXY-7-1	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella huaxiensis	OXY-8-1	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella huaxiensis	OXY-8-2	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella huaxiensis	OXY-8-3	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Klebsiella spallanzanii	OXY-9-1	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Paramesorhizobium desertificum	PAD-1	carbapenem	None	antibiotic inactivation
Pseudomonas tohonis	PAM-5	carbapenem;cephalosporin	None	antibiotic inactivation
Staphylococcus aureus	PC1	penicillin beta-lactam	None	antibiotic inactivation

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Pseudomonas aeruginosa	PDC-639	monobactam;carbapenem	None	antibiotic inactivation
Pseudomonas aeruginosa	PDC-640	monobactam;carbapenem	None	antibiotic inactivation
Burkholderia multivorans	PEN-A10	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A11	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A12	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A13	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A15	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A16	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A17	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A18	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A19	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A1	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A20	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A21	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A22	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A23	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A24	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A25	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A26	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A27	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A28	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A29	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A2	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A30	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A31	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A32	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A33	penicillin beta-lactam	None	antibiotic inactivation

Burkholderia multivorans	PEN-A34	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A35	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A37	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A38	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A3	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A5	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A6	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A7	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A8	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia multivorans	PEN-A9	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia cenocepacia	PEN-B1	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia cenocepacia	PEN-B2	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia cenocepacia	PEN-B3	penicillin beta-lactam	None	antibiotic inactivation
Burkholderia cenocepacia	PEN-B4	penicillin beta-lactam	None	antibiotic inactivation
Pseudomonas aeruginosa	PER-17	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Proteus mirabilis	PER-18	monobactam;carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Pseudoxanthomonas japonica	PJM-2	carbapenem;cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Raoultella planticola	PLA-4	carbapenem;cephalosporin	None	antibiotic inactivation
Raoultella planticola	PLA-5	carbapenem;cephalosporin	None	antibiotic inactivation
Pandoraea sputorum	PNC-1	cephalosporin	None	antibiotic inactivation
Pandoraea sputorum	PNC-2	cephalosporin	None	antibiotic inactivation
Pandoraea sputorum	PNC-3	cephalosporin	None	antibiotic inactivation
Riemerella anatipestifer	RAA-1	cephalosporin	None	antibiotic inactivation
Rahnella aquatilis	RAHN-3	cephalosporin	None	antibiotic inactivation
Rahnella aquatilis	RAHN-4	cephalosporin	None	antibiotic inactivation
Rahnella aquatilis	RAHN-5	cephalosporin	None	antibiotic inactivation
Rahnella aquatilis	RAHN-6	cephalosporin	None	antibiotic inactivation

Riemerella anatipestifer	RASA-1	cephalosporin	None	antibiotic inactivation
uncultured bacterium	RSC1-1	cephalosporin	None	antibiotic inactivation
uncultured bacterium	RSD1-1	penicillin beta-lactam	None	antibiotic inactivation
Citrobacter amalonaticus	SED-2	penicillin beta-lactam	None	antibiotic inactivation
Serratia sp.	SFC-2	carbapenem	None	antibiotic inactivation
Serratia fonticola	SFDC-1	cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-229	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Escherichia coli	SHV-230	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-231	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-232	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-233	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-234	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-235	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-236	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-237	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-238	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-239	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-240	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-241	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-242	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-243	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-244	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Klebsiella pneumoniae	SHV-245	cephalosporin;penicillin beta-lactam	None	antibiotic inactivation
Serratia marcescens	SRT-4	cephalosporin	None	antibiotic inactivation
Neisseria gonorrhoeae	TEM-239	monobactam;cephalosporin;penicillin beta-lactam	ampicillin	antibiotic inactivation
Escherichia coli	TEM-248	monobactam;cephalosporin;penicillin beta-lactam	ampicillin	antibiotic inactivation
Escherichia coli	TEM-249	monobactam;cephalosporin;penicillin beta-lactam	ampicillin	antibiotic inactivation

Klebsiella oxytoca	TEM-250	monobactam;cephalosporin	ampicillin beta-lactam	antibiotic inactivation
Escherichia coli	TEM-251	monobactam;cephalosporin	ampicillin beta-lactam	antibiotic inactivation
Escherichia coli	TEM-252	monobactam;cephalosporin	ampicillin beta-lactam	antibiotic inactivation
Escherichia coli	TEM-253	monobactam;cephalosporin	ampicillin beta-lactam	antibiotic inactivation
Escherichia coli	TEM-254	monobactam;cephalosporin	ampicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	TEM-255	monobactam;cephalosporin	ampicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	TEM-256	monobactam;cephalosporin	ampicillin beta-lactam	antibiotic inactivation
Klebsiella pneumoniae	TEM-257	monobactam;cephalosporin	ampicillin beta-lactam	antibiotic inactivation
Enterobacter cloacae	TEM-258	monobactam;cephalosporin	ampicillin beta-lactam	antibiotic inactivation
Vibrio parahaemolyticus	VEB-18	monobactam;cephalosporin	None	antibiotic inactivation
Aeromonas veronii	VEB-28	monobactam;cephalosporin	None	antibiotic inactivation
Proteus mirabilis	VEB-29	monobactam;cephalosporin	None	antibiotic inactivation
Proteus mirabilis	VEB-30	monobactam;cephalosporin	None	antibiotic inactivation
Klebsiella pneumoniae	VEB-31	monobactam;cephalosporin	None	antibiotic inactivation
Aeromonas veronii	VEB-32	monobactam;cephalosporin	None	antibiotic inactivation
Aeromonas veronii	VEB-33	monobactam;cephalosporin	None	antibiotic inactivation
Acinetobacter variabilis	VEB-34	monobactam;cephalosporin	None	antibiotic inactivation
Providencia rettgeri	VEB-35	monobactam;cephalosporin	None	antibiotic inactivation
Escherichia coli	VEB-36	monobactam;cephalosporin	None	antibiotic inactivation
Proteus mirabilis	VEB-37	monobactam;cephalosporin	None	antibiotic inactivation
Proteus mirabilis	VEB-38	monobactam;cephalosporin	None	antibiotic inactivation
Pseudomonas aeruginosa	VEB-39	monobactam;cephalosporin	None	antibiotic inactivation
Enterobacter cloacae	VIM-88	carbapenem;cephalosporin	None penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-89	carbapenem;cephalosporin	None penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-90	carbapenem;cephalosporin	None penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	VIM-91	carbapenem;cephalosporin	None penicillin beta-lactam	antibiotic inactivation
Yokenella regensburgei	YOC-1	cephalosporin	None	antibiotic inactivation

Pseudomonas aeruginosa	AEB-16	monobactam;cephalosporin	None	antibiotic inactivation
Yersinia ruckeri	YRC-1	cephalosporin;penicillin beta-lactam	ceftriaxone;ceftazidime;cefuroxime	antibiotic inactivation
Citrobacter sedlakii	SED-1	cephalosporin;penicillin beta-lactam	cefuroxime;amoxicillin;piperacillin	antibiotic inactivation
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin;isoniazid	rifampin;resistance to rifampin	antibiotic target alteration
Mycobacterium tuberculosis H37Rv	Mycobacterium tuberculosis H37Rv	streptomycin;isoniazid	delamanid;resistance to delamanid	antibiotic target alteration
Bacteroides fragilis	CfiA28	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA29	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA30	carbapenem	None	antibiotic inactivation
Bacteroides fragilis	CfiA31	carbapenem	None	antibiotic inactivation
Mycobacterium avium 104	Mycobacterium avium gyrA with mutation	fluoroquinolone antibiotic	resistance to levofloxacin	antibiotic target alteration
Enterobacter cloacae	CMH-26	cephalosporin	None	antibiotic inactivation
Aeromonas hydrophila	CTX-M-260	cephalosporin	None	antibiotic inactivation
Escherichia coli str. K-12	Escherichia coli PBP3 mutants	monobactam;cephalosporin	cefepime;ceftazidime;ceftriaxone	antibiotic target alteration
Klebsiella oxytoca	OXY-1-7	monobactam;cephalosporin	penicillin beta-lactam	antibiotic inactivation
Pseudomonas aeruginosa	AAC(3)-Ib/AAC(6')-Ib3 bifunctional	aminoglycoside	astromycin;amikacin;sisonalix	antibiotic inactivation
Escherichia coli str. K-12	Escherichia coli AcrAB-TolC with mutation	cephalosporin;penicillin	cefepime;ceftazidime;ceftriaxone	antibiotic target alteration
Escherichia coli str. K-12	Escherichia coli AcrAB-TolC with mutation	cephalosporin;penicillin	cefepime;ceftazidime;ceftriaxone	antibiotic target alteration
None	None	None	None	None