Protein	Mechanism	Mutations[1]
AmpC	Structural change	**G27D, T105A, V205L, V356I**, **G391A**
AmpD	AmpC overexpression	None
AmpDh2	AmpC overexpression	**V40I**
AmpDh3	AmpC overexpression	None
AmpR	AmpC overexpression	**G283E, M288R**
ArmZ	MexXY overexpression	**C40R, L88P, S112N, D119E, I237V, V243A**
DacB	AmpC overexpression	None
DacC	PBP5	None
FtsI	PBP3	G8S
FusA1	Elongation factor G	H166D
GalU	Lipopolisacharide synthesis	None
GyrA	DNA gyrase (subunit A)	None
GyrB	DNA gyrase (subunit B)	S466F
MexA	Intrinsic antibiotic resistance	A111T
MexB	Intrinsic antibiotic resistance	**G957D, S1041E, V1042A**
MexC	MexCD overexpression	**E251Q,A262E,A277T,H310R,S330A,A378T,A384V**
MexD	MexCD overexpression	**T87S,S845A**
MexE	MexEF overexpression	None
MexF	MexEF overexpression	None
MexR	MexAB overexpression	M1_L13del, **V132A**
MexS	MexEF overexpression/OprD downregulation	**V73A, D249N**
MexT	MexEF overexpression/OprD downregulation	M1_A78del, **F172I**
MexX	Intrinsic antibiotic resistance	**A30T, K329Q, L331V, W358R**
MexY	Intrinsic antibiotic resistance	**I536V, T543A, G589A,Q840E, N1036T**
MexZ	MexXY overexpression	**G89S**
Mpl	Recycling of cell wall components (AmpC overexpression)	R73C
NalC	MexAB overexpression	**G71E, D79E, S209R**
NalD	MexAB overexpression	None
NfxB	MexCD overexpression	none (HE2011025,HE2040684) multiple (HE2011311, HE2011471,HE2105886)[2]
OprD	Inactivation OprD	**T103S,K115T,F170L,P186G,V189T,R310E,A315G,G425A**
OprJ	MexCD overexpression	None
OprM	Intrinsic antibiotic resistance	None
OprN	MexEF overexpression	**S13P**
ParC	DNA topoisomerase IV (subunit A)	**P752T**
ParE	DNA topoisomerase IV (subunit B)	**D533E**
ParR	MexXY and MexEF overexpression/ OprD downregulation	**S170N,L153R**
ParS	MexXY overexpression/OprD downregulation	aa70InsPR**, H398R**
PbpA	PBP2	none
PmrA	Lipopolisacharide synthesis	none
PmrB	Lipopolisacharide synthesis	**S2P, A4T, V15I, G68S, Y345H**

[1]mutations described previously as natural polymorphisms are in bold type
[2]see multiple alignment sequences using Clustal (EMBL-EBI) in Figure S2