

Table 4. Location of the various genes Modified July, 2007  
Originally modified from AAC 1999 43:2823-30 with permission from ASM Journals

Gene	Number	Genera
<b>METHYLASES</b>		
<i>erm</i> (A)	7	<i>Actinobacillus</i> , <i>Bacteriodes</i> , <i>Peptostreptococcus</i> , <i>Prevotella</i> , <i>Staphylococcus</i> , <i>Streptococcus</i> , <i>Helcococcus</i>
<i>erm</i> (B)	33	<i>Actinobacillus</i> , <i>Acinetobacter</i> , <i>Aerococcus</i> , <i>Arcanobacterium</i> , <i>Bacillus</i> , <i>Bacteriodes</i> , <i>Citrobacter</i> , <i>Corynebacterium</i> , <i>Clostridium</i> , <i>Enterobacter</i> , <i>Escherichia</i> , <i>Eubacterium</i> , <i>Enterococcus</i> , <i>Fusobacterium</i> , <i>Gemella</i> , <i>Haemophilus</i> , <i>Klebsiella</i> , <i>Lactobacillus</i> , <i>Micrococcus</i> , <i>Neisseria</i> , <i>Pantoeae</i> , <i>Pediococcus</i> , <i>Peptostreptococcus</i> , <i>Porphyromonas</i> , <i>Proteus</i> , <i>Pseudomonas</i> , <i>Ruminococcus</i> , <i>Rothia</i> , <i>Serratia</i> , <i>Staphylococcus</i> , <i>Streptococcus</i> , <i>Wolinella</i> , <i>Treponema</i>
<i>erm</i> (C)	16	<i>Actinobacillus</i> , <i>Actinomyces</i> , <i>Bacillus</i> , <i>Bacteriodes</i> , <i>Corynebacterium</i> , <i>Eubacterium</i> , <i>Enterococcus</i> , <i>Haemophilus</i> , <i>Lactobacillus</i> , <i>Micrococcus</i> , <i>Neisseria</i> , <i>Prevotella</i> , <i>Peptostreptococcus</i> , <i>Staphylococcus</i> , <i>Streptococcus</i> , <i>Wolinella</i>
<i>erm</i> (D)	2	<i>Bacillus</i> , <i>Salmonella</i>
<i>erm</i> (E)	5	<i>Bacteroides</i> , <i>Eubacterium</i> , <i>Fusobacterium</i> , <i>Ruminococcus</i> , <i>Shigella</i> , <i>Streptomyces</i>
<i>erm</i> (F)	24	<i>Actinobacillus</i> , <i>Actinomyces</i> , <i>Bacteroides</i> , <i>Clostridium</i> , <i>Corynebacterium</i> , <i>Eubacterium</i> , <i>Enterococcus</i> , <i>Fusobacterium</i> , <i>Gardnerella</i> , <i>Haemophilus</i> , <i>Lactobacillus</i> , <i>Mobiluncus</i> , <i>Neisseria</i> , <i>Porphyromonas</i> , <i>Prevotella</i> , <i>Peptostreptococcus</i> , <i>Ruminococcus</i> , <i>Shigella</i> , <i>Selenomonas</i> , <i>Staphylococcus</i> , <i>Streptococcus</i> , <i>Treponema</i> , <i>Veillonella</i> , <i>Wolinella</i>
<i>erm</i> (G)	7	<i>Bacillus</i> , <i>Bacteroides</i> , <i>Catenibacterium</i> , <i>Lactobacillus</i> , <i>Prevotella</i> , <i>Porphyromonas</i> , <i>Staphylococcus</i>
<i>erm</i> (H)	1	<i>Streptomyces</i>
<i>erm</i> (I)	1	<i>Streptomyces</i>
<i>erm</i> (N)	1	<i>Streptomyces</i>
<i>erm</i> (O)	1	<i>Streptomyces</i>
<i>erm</i> (Q)	6	<i>Actinobacillus</i> , <i>Bacteroides</i> , <i>Clostridium</i> , <i>Staphylococcus</i> , <i>Streptococcus</i> <i>Wolinella</i>
<i>erm</i> (R)	1	<i>Arthrobacter</i>
<i>erm</i> (S)	1	<i>Streptomyces</i>
<i>erm</i> (T)	2	<i>Lactobacillus</i> , <i>Streptococcus</i>
<i>erm</i> (U)	1	<i>Streptomyces</i>

## METHYLASES

<i>erm(V)</i>	3	<i>Eubacterium, Fusobacterium, Streptomyces</i>
<i>erm(W)</i>	1	<i>Micromonospora</i>
<i>erm(X)</i>	3	<i>Arcanobacterium, Corynebacterium, Propionibacterium</i>
<i>erm(Y)</i>	1	<i>Staphylococcus</i>
<i>erm(Z)</i>	1	<i>Streptomyces</i>
<i>erm(30)</i>	1	<i>Streptomyces</i>
<i>erm(31)</i>	1	<i>Streptomyces</i>
<i>erm(32)</i>	1	<i>Streptomyces</i>
<i>erm(33)</i>	1	<i>Staphylococcus</i>
<i>erm(34)</i>	1	<i>Bacillus</i>
<i>erm(35)</i>	1	<i>Bacteriodes</i>
<i>erm(36)</i>	1	<i>Micrococcus</i>
<i>erm(37)</i>	1	<i>Mycobacterium</i>
<i>erm(38)</i>	1	<i>Mycobacterium</i>
<i>erm(39)</i>	1	<i>Mycobacterium</i>
<i>erm(40)</i>	1	<i>Mycobacterium</i>

## ATP-BINDING TRANSPORTERS

<i>car(A)</i>	1	<i>Streptomyces</i>
<i>msr(A)</i>	7	<i>Corynebacterium, Enterobacter, Enterococcus, Gemella, Pseudomonas, Staphylococcus, Streptococcus</i>
<i>msr(C)</i>	1	<i>Enterococcus</i>
<i>msr(D)<sup>a</sup></i>	19	<i>Acinetobacter, Citrobacter, Corynebacterium, Enterococcus, Enterobacter, Escherichia, Gemella, Klebsiella, Morganella, Neisseria, Proteus, Providencia, Pseudomonas, Ralstonia, Staphylococcus, Streptococcus, Serratia, Stenotrophomonas, Bacteroides</i>
<i>lsa(A)</i>	1	<i>Enterococcus</i>
<i>lsa(B)</i>	1	<i>Staphylococcus</i>
<i>ole(B)</i>	1	<i>Streptomyces</i>
<i>ole(C)</i>	1	<i>Streptomyces</i>
<i>srm(B)</i>	1	<i>Streptomyces</i>
<i>tlr(C)</i>	1	<i>Streptomyces</i>
<i>vga(A)</i>	1	<i>Staphylococcus</i>
<i>vga(B)</i>	1	<i>Staphylococcus</i>

## MAJOR FACILITATORS

*lmr(A)* 1 *Streptomyces*

*mef(A)* 24 *Acinetobacter, Bacteroides, Citrobacter, Corynebacterium, Enterococcus, Enterobacter, Escherichia, Fusobacterium, Gemella, Klebsiella, Lactobacillus, Micrococcus, Morganella, Neisseria, Pantoeae, Providencia, Proteus, Ralstonia, Pseudomonas, Salmonella, Serratia, Staphylococcus, Streptococcus, Stenotrophomonas*

## ESTERASES

*ere(A)* 11 *Citrobacter, Enterobacter, Escherichia, Klebsiella, Pantoeae, Providencia, Pseudomonas, Serratia, Staphylococcus, Stenotrophomonas, Vibrio*

*ere(B)* 8 *Acinetobacter, Citrobacter, Enterobacter, Escherichia, Klebsiella, Proteus, Pseudomonas, Staphylococcus*

## LYASES

*vgb(A)* 2 *Enterococcus, Staphylococcus*

*vgb(B)* 1 *Staphylococcus*

## TRANSFERASES

*lnu(A)* 1 *Staphylococcus*

*lnu(B)* 2 *Enterococcus, Staphylococcus*

*lnu(C)* 1 *Streptococcus*

*lnu(D)* 1 *Streptococcus*

*lnu(F)* 2 *Escherichia, Salmonella*

*vat(A)* 1 *Staphylococcus*

*vat(B)* 1 *Staphylococcus*

*vat(C)* 1 *Staphylococcus*

*vat(D)* 1 *Enterococcus*

*vat(E)* 2 *Enterococcus, Lactobacillus*

*vat(F)* 1 *Yersinia*

## PHOSPHORYLASES

*mph(A)* 10 *Aeromonas, Escherichia, Citrobacter, Enterobacter, Klebsiella, Pantoeae, Pseudomonas, Proteus Serratia, Stenotrophomonas*

*mph(B)* 4 *Escherichia, Enterobacter, Pseudomonas, Proteus*

*mph(C)* 2 *Staphylococcus, Stenotrophomonas*

*mph(D)* 6 *Escherichia, Klebsiella, Pantoeae, Proteus, Pseudomonas, Stenotrophomonas*

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Blue indicates new since last update. These are primarily from Patterson et al., 2007, *Environmental Microbiology* 9:703-15 and Zolezzi et al., 2007 *Antimicrob Agents Chemoth* 51:1487-1490.