Supplementary material

Table S2. Overview of the genes within the antimicrobial resistance classes.

|  |  |
| --- | --- |
| **Phenotype** | **Reference\_name** |
| **Aminoglycoside** | aac(2')-Ib\_1\_U41471 |
|  | aac(2')-Id\_1\_U72743 |
|  | aac(2\_)-Ia\_1\_L06156 |
|  | aac(2\_)-Ib\_1\_U41471 |
|  | aac(2\_)-Ic\_1\_U72714 |
|  | aac(2\_)-Id\_1\_U72743 |
|  | aac(2\_)-Ie\_1\_NC\_011896 |
|  | aac(3)-I\_1\_AJ877225 |
|  | aac(3)-Ia\_1\_X15852 |
|  | aac(3)-Ib\_1\_L06157 |
|  | aac(3)-Ib-aac(6')-Ib\_1\_AF355189 |
|  | aac(3)-Ib-aac(6\_)-Ib\_1\_AF355189 |
|  | aac(3)-Ic\_1\_AJ511268 |
|  | aac(3)-Id\_1\_AB114632 |
|  | aac(3)-If\_1\_AY884051 |
|  | aac(3)-Ig\_1\_CP000282 |
|  | aac(3)-Ih\_1\_CP000490 |
|  | aac(3)-Ii\_1\_CP000356 |
|  | aac(3)-IIa\_1\_X51534 |
|  | aac(3)-IIb\_1\_M97172 |
|  | aac(3)-IIc\_1\_X54723 |
|  | aac(3)-IId\_1\_EU022314 |
|  | aac(3)-IIe\_1\_EU022315 |
|  | aac(3)-IIIa\_1\_X55652 |
|  | aac(3)-IIIb\_1\_L06160 |
|  | aac(3)-IIIc\_1\_L06161 |
|  | aac(3)-IVa\_1\_X01385 |
|  | aac(3)-IXa\_1\_M55427 |
|  | aac(3)-VIa\_1\_M88012 |
|  | aac(3)-VIIa\_1\_M22999 |
|  | aac(3)-VIIIa\_1\_M55426 |
|  | aac(3)-Xa\_1\_AB028210 |
|  | aac(6')\_3\_EU912537 |
|  | aac(6')-31\_1\_AJ640197 |
|  | aac(6')-32\_1\_EF614235 |
|  | aac(6')-aph(2'')\_1\_KF652095 |
|  | aac(6')-aph(2'')\_1\_M13771 |
|  | aac(6')-Iad\_1\_AB119105 |
|  | aac(6')-Ib\_1\_M21682 |
|  | aac(6')Ib-cr\_1\_DQ303918 |
|  | aac(6')Ib-cr\_2\_EF636461 |
|  | aac(6')Ib-cr\_3\_EF210035 |
|  | aac(6')-Ic\_1\_M94066 |
|  | aac(6')-IIa\_1\_M29695 |
|  | aac(6')-IIc\_1\_AF162771 |
|  | aac(6')-Im\_1\_AF337947 |
|  | aac(6\_)\_1\_AY553333 |
|  | aac(6\_)\_2\_DQ302723 |
|  | aac(6\_)\_3\_EU912537 |
|  | aac(6\_)-31\_1\_AJ640197 |
|  | aac(6\_)-32\_1\_EF614235 |
|  | aac(6\_)-33\_1\_GQ337064 |
|  | aac(6\_)-aph(2\_\_)\_1\_M13771 |
|  | aac(6\_)-I30\_1\_AY289608 |
|  | aac(6\_)-Ia\_1\_M18967 |
|  | aac(6\_)-Iad\_1\_AB119105 |
|  | aac(6\_)-Iae\_1\_AB104852 |
|  | aac(6\_)-Iaf\_1\_AB462903 |
|  | aac(6\_)-Iai\_1\_EU886977 |
|  | aac(6\_)-Ib\_1\_M21682 |
|  | aac(6\_)-Ic\_1\_M94066 |
|  | aac(6\_)-Id\_1\_X12618 |
|  | aac(6\_)-If\_1\_X55353 |
|  | aac(6\_)-Ig\_1\_L09246 |
|  | aac(6\_)-Ih\_1\_L29044 |
|  | aac(6\_)-IIa\_1\_M29695 |
|  | aac(6\_)-IIb\_1\_L06163 |
|  | aac(6\_)-IIc\_1\_AF162771 |
|  | aac(6\_)-Ij\_1\_L29045 |
|  | aac(6\_)-Ik\_1\_L29510 |
|  | aac(6\_)-Il\_1\_Z54241 |
|  | aac(6\_)-Im\_1\_AF337947 |
|  | aac(6\_)-Iq\_1\_AF047556 |
|  | aac(6\_)-Ir\_1\_AF031326 |
|  | aac(6\_)-Is\_1\_AF031327 |
|  | aac(6\_)-Isa\_1\_AB116646 |
|  | aac(6\_)-It\_1\_AF031328 |
|  | aac(6\_)-Iu\_1\_AF031329 |
|  | aac(6\_)-Iv\_1\_AF031330 |
|  | aac(6\_)-Iw\_1\_AF031331 |
|  | aac(6\_)-Iz\_1\_AF140221 |
|  | aac\_1\_AJ628983 |
|  | aacA29\_1\_AY139599 |
|  | aacA4\_1\_KM278199 |
|  | aacA43\_1\_HQ247816 |
|  | aadA1\_1\_X02340 |
|  | aadA1\_2\_FJ591054 |
|  | aadA1\_2\_JN815078 |
|  | aadA1\_3\_JQ414041 |
|  | aadA1\_4\_M95287 |
|  | aadA1\_5\_JQ480156 |
|  | aadA1\_5\_JX185132 |
|  | aadA10\_1\_U37105 |
|  | aadA11\_1\_AY144590 |
|  | aadA12\_1\_AY665771 |
|  | aadA13\_1\_AY713504 |
|  | aadA14\_1\_AJ884726 |
|  | aadA15\_1\_DQ393783 |
|  | aadA16\_1\_EU675686 |
|  | aadA17\_1\_FJ460181 |
|  | aadA2\_1\_X68227 |
|  | aadA2\_2\_JQ364967 |
|  | aadA21\_1\_AY171244 |
|  | aadA22\_1\_AM261837 |
|  | aadA23\_1\_AJ809407 |
|  | aadA24\_1\_AM711129 |
|  | aadA3\_1\_AF047479 |
|  | aadA4\_1\_Z50802 |
|  | aadA5\_1\_AF137361 |
|  | aadA6\_1\_AF140629 |
|  | aadA7\_1\_AF224733 |
|  | aadA8\_1\_AF326210 |
|  | aadA8b\_1\_AM040708 |
|  | aadA9\_1\_AJ420072 |
|  | aadB\_1\_JN119852 |
|  | aadD\_1\_AF181950 |
|  | aadE\_1\_KF421157 |
|  | aadE\_1\_KF864551 |
|  | aadK\_1\_M26879 |
|  | ant(3'')-Ih-aac(6')-IId\_1\_AF453998 |
|  | ant(3\_\_)-Ih-aac(6\_)-IId\_1\_AF453998 |
|  | ant(4')-Ib\_1\_AJ506108 |
|  | ant(4\_)-Ib\_1\_AJ506108 |
|  | ant(4\_)-IIa\_1\_M98270 |
|  | ant(4\_)-IIb\_1\_AY114142 |
|  | ant(6)-Ia\_1\_AF330699 |
|  | ant(6)-Ib\_1\_FN594949 |
|  | aph(2'')-Ib\_1\_AF337947 |
|  | aph(2'')-Ib\_1\_KF652098 |
|  | aph(2'')-Ic\_1\_U51479 |
|  | aph(2'')-Id\_1\_AF016483 |
|  | aph(2'')-Ie\_1\_AY743255 |
|  | aph(2'')-If\_1\_KF652097 |
|  | aph(2'')-Ih\_1\_KF652096 |
|  | aph(2\_\_)-Ib\_1\_AF337947 |
|  | aph(2\_\_)-Ic\_1\_U51479 |
|  | aph(2\_\_)-Id\_1\_AF016483 |
|  | aph(2\_\_)-Ie\_1\_AY743255 |
|  | aph(3')-Ia\_1\_V00359 |
|  | aph(3')-Ib\_1\_M20305 |
|  | aph(3')-Ic\_1\_X62115 |
|  | aph(3')-Id\_1\_Z48231 |
|  | aph(3')-IIa\_1\_X57709 |
|  | aph(3')-IIb\_1\_X90856 |
|  | aph(3')-III\_1\_M26832 |
|  | aph(3')-Va\_1\_K00432 |
|  | aph(3')-Vb\_1\_M22126 |
|  | aph(3')-VIa\_1\_X07753 |
|  | aph(3')-VIb\_1\_AJ627643 |
|  | aph(3')-VIIa\_1\_M29953 |
|  | aph(3\_)-Ia\_1\_V00359 |
|  | aph(3\_)-Ib\_1\_M20305 |
|  | aph(3\_)-Ic\_1\_X62115 |
|  | aph(3\_)-Id\_1\_Z48231 |
|  | aph(3\_)-IIa\_1\_X57709 |
|  | aph(3\_)-IIb\_1\_X90856 |
|  | aph(3\_)-IIc\_1\_AM743169 |
|  | aph(3\_)-III\_1\_M26832 |
|  | aph(3\_)-IV\_1\_X03364 |
|  | aph(3\_)-Va\_1\_K00432 |
|  | aph(3\_)-Vb\_1\_M22126 |
|  | aph(3\_)-Vc\_1\_S81599 |
|  | aph(3\_)-VIa\_1\_X07753 |
|  | aph(3\_)-VIb\_1\_AJ627643 |
|  | aph(3\_)-VIIa\_1\_M29953 |
|  | aph(3\_)-VIII\_1\_AF182845 |
|  | aph(3\_)-XV\_1\_Y18050 |
|  | aph(3\_\_)-Ia\_1\_M16482 |
|  | aph(3\_\_)-Ic\_1\_DQ336355 |
|  | aph(4)-Ia\_1\_V01499 |
|  | aph(4)-Ib\_1\_X03615 |
|  | aph(6)-Ia\_1\_AY971801 |
|  | aph(6)-Ib\_1\_X05648 |
|  | aph(6)-Ic\_1\_X01702 |
|  | aph(9)-Ia\_1\_U94857 |
|  | aph(9)-Ib\_1\_U70376 |
|  | armA\_1\_AY220558 |
|  | npmA\_1\_AB261016 |
|  | rmtA\_1\_AB120321 |
|  | rmtB\_1\_AB103506 |
|  | rmtB2\_1\_JN968578 |
|  | rmtC\_1\_AB194779 |
|  | rmtD\_1\_DQ914960 |
|  | rmtD2\_1\_HQ401565 |
|  | rmtE\_1\_GU201947 |
|  | rmtf\_1\_JQ808129 |
|  | rmtF\_1\_JQ955744 |
|  | rmtG\_1\_444327362 |
|  | rmtG\_1\_KJ004567 |
|  | rmtH\_1\_KC544262 |
|  | spc\_1\_X02588 |
|  | sph\_1\_HQ424461 |
|  | str\_1\_X92946 |
|  | str\_2\_FN435330 |
|  | str\_3\_AM932524 |
|  | strA\_1\_M96392 |
|  | strA\_2\_M28829 |
|  | strA\_3\_AF024602 |
|  | strA\_4\_AF321551 |
|  | strA\_5\_AF321550 |
|  | strB\_1\_M96392 |
|  | strB\_3\_AF024602 |
| **Beta-lactam** | ampH\_1\_AJ276031 |
|  | ampH\_2\_HQ586946 |
|  | ampS\_1\_X80276 |
|  | blaA\_1\_DQ424965 |
|  | blaA\_2\_AY954728 |
|  | blaACC-1\_2\_AM939420 |
|  | blaACC-2\_1\_AF180952 |
|  | blaACC-3\_1\_AF180958 |
|  | blaACC-4\_1\_GU256641 |
|  | blaACI-1\_1\_AJ007350 |
|  | blaACT-1\_1\_U58495 |
|  | blaACT-10\_1\_JN848330 |
|  | blaACT-12\_1\_JX440355 |
|  | blaACT-14\_1\_JX440354 |
|  | blaACT-15\_1\_JX440356 |
|  | blaACT-16\_1\_AB737978 |
|  | blaACT-2\_1\_AM076977 |
|  | blaACT-3\_1\_EF125013 |
|  | blaACT-4\_2\_AJ311172 |
|  | blaACT-5\_1\_FJ237369 |
|  | blaACT-6\_1\_FJ237366 |
|  | blaACT-7\_1\_FJ237368 |
|  | blaACT-9\_1\_HQ693810 |
|  | blaADC-25\_1\_EF016355 |
|  | blaAER-1\_1\_U14748 |
|  | blaAST-1\_1\_AF279904 |
|  | blaB-10\_1\_AY348325 |
|  | blaB-11\_1\_AY348326 |
|  | blaB-12\_1\_EF595958 |
|  | blaB-13\_1\_EF595959 |
|  | blaB-14\_1\_JN635697 |
|  | blaB-2\_1\_AF189300 |
|  | blaB-3\_1\_AF189301 |
|  | blaB-3\_2\_AF189299 |
|  | blaB-5\_1\_AF189303 |
|  | blaB-6\_1\_AF189302 |
|  | blaB-7\_1\_AF189304 |
|  | blaB-8\_1\_AF189305 |
|  | blaB-9\_1\_AY348324 |
|  | blaBEL-1\_1\_DQ089809 |
|  | blaBEL-2\_1\_FJ666063 |
|  | blaBEL-3\_1\_GQ202694 |
|  | blaBES-1\_1\_AF234999 |
|  | blaBIC-1\_1\_GQ260093 |
|  | blaBIL-1\_1\_X74512 |
|  | blaBKC-1\_1\_KP689347 |
|  | blaBRO-2\_1\_Z54181 |
|  | blaCARB-1\_1\_AF313471 |
|  | blaCARB-10\_1\_EU850412 |
|  | blaCARB-11\_1\_AY008290 |
|  | blaCARB-12\_1\_D13210 |
|  | blaCARB-2\_1\_M69058 |
|  | blaCARB-3\_1\_S46063 |
|  | blaCARB-4\_1\_U14749 |
|  | blaCARB-5\_1\_AF135373 |
|  | blaCARB-6\_1\_AF030945 |
|  | blaCARB-7\_1\_AF409092 |
|  | blaCARB-8\_1\_AY178993 |
|  | blaCARB-9\_1\_AY248038 |
|  | blaCEPH-A3\_1\_AY112998 |
|  | blaCFE-1\_1\_AB107899 |
|  | blaCGB-1\_1\_EF672680 |
|  | blaCKO-1\_1\_AF477396 |
|  | blaCME-1\_1\_AJ006275 |
|  | blaCMG\_1\_AY265892 |
|  | blaCMY-1\_1\_X92508 |
|  | blaCMY-10\_1\_AF373218 |
|  | blaCMY-104\_1\_KF150216 |
|  | blaCMY-11\_1\_AF381626 |
|  | blaCMY-110\_1\_AB872957 |
|  | blaCMY-12\_1\_Y16785 |
|  | blaCMY-13\_1\_AY339625 |
|  | blaCMY-14\_1\_EU600193 |
|  | blaCMY-14\_2\_AJ555825 |
|  | blaCMY-15\_1\_AJ555823 |
|  | blaCMY-16\_1\_FM995219 |
|  | blaCMY-16\_2\_FJ855437 |
|  | blaCMY-17\_1\_AY513266 |
|  | blaCMY-18\_1\_AY743434 |
|  | blaCMY-19\_1\_AB194410 |
|  | blaCMY-2\_1\_X91840 |
|  | blaCMY-20\_1\_AY960293 |
|  | blaCMY-21\_1\_DQ139328 |
|  | blaCMY-22\_1\_DQ256079 |
|  | blaCMY-23\_1\_DQ438952 |
|  | blaCMY-24\_1\_EF415650 |
|  | blaCMY-25\_1\_EU515249 |
|  | blaCMY-26\_1\_AB300358 |
|  | blaCMY-27\_1\_EU515250 |
|  | blaCMY-28\_1\_EF561644 |
|  | blaCMY-29\_1\_EF685371 |
|  | blaCMY-3\_1\_Y16783 |
|  | blaCMY-30\_1\_EF685372 |
|  | blaCMY-31\_1\_EU331425 |
|  | blaCMY-32\_1\_EU496815 |
|  | blaCMY-33\_1\_EU496816 |
|  | blaCMY-34\_1\_EF394370 |
|  | blaCMY-35\_1\_EF394371 |
|  | blaCMY-36\_1\_EU331426 |
|  | blaCMY-37\_1\_AB280919 |
|  | blaCMY-38\_1\_AM931008 |
|  | blaCMY-39\_1\_HM565135 |
|  | blaCMY-4\_1\_AF420597 |
|  | blaCMY-40\_1\_EU515251 |
|  | blaCMY-41\_1\_AB429270 |
|  | blaCMY-42\_1\_HM146927 |
|  | blaCMY-43\_1\_HQ267530 |
|  | blaCMY-44\_1\_FJ437066 |
|  | blaCMY-45\_1\_FN546177 |
|  | blaCMY-46\_1\_FN556186 |
|  | blaCMY-47\_1\_HM046998 |
|  | blaCMY-48\_1\_HM569226 |
|  | blaCMY-49\_1\_GQ402541 |
|  | blaCMY-5\_1\_Y17716 |
|  | blaCMY-51\_1\_JQ733571 |
|  | blaCMY-53\_1\_HQ336940 |
|  | blaCMY-54\_1\_HM544039 |
|  | blaCMY-55\_1\_HM544040 |
|  | blaCMY-56\_1\_HQ322613 |
|  | blaCMY-57\_1\_HQ285243 |
|  | blaCMY-58\_1\_HQ185697 |
|  | blaCMY-59\_2\_AB587082 |
|  | blaCMY-6\_1\_AJ011293 |
|  | blaCMY-60\_1\_HQ267531 |
|  | blaCMY-61\_1\_JF460795 |
|  | blaCMY-62\_1\_JF460796 |
|  | blaCMY-63\_1\_HQ650104 |
|  | blaCMY-64\_1\_HQ832678 |
|  | blaCMY-65\_1\_JF780936 |
|  | blaCMY-66\_1\_JN714478 |
|  | blaCMY-67\_1\_JQ711185 |
|  | blaCMY-68\_1\_JN714480 |
|  | blaCMY-69\_1\_JX049132 |
|  | blaCMY-7\_1\_AY324388 |
|  | blaCMY-70\_1\_JX440350 |
|  | blaCMY-71\_1\_JQ711184 |
|  | blaCMY-72\_1\_JX440352 |
|  | blaCMY-73\_1\_GQ351345 |
|  | blaCMY-74\_1\_JX440349 |
|  | blaCMY-75\_1\_JQ733572 |
|  | blaCMY-76\_1\_JQ733573 |
|  | blaCMY-77\_1\_JX440353 |
|  | blaCMY-78\_1\_JQ733575 |
|  | blaCMY-79\_1\_JQ733576 |
|  | blaCMY-8\_1\_EF382672 |
|  | blaCMY-8\_2\_DQ094251 |
|  | blaCMY-80\_1\_JQ733577 |
|  | blaCMY-81\_1\_JQ733578 |
|  | blaCMY-83\_1\_JX440351 |
|  | blaCMY-84\_1\_JQ733579 |
|  | blaCMY-87\_1\_AB699171 |
|  | blaCMY-9\_1\_AB061794 |
|  | blaCMY-94\_1\_JX514368 |
|  | blaCMY-95\_1\_JX514369 |
|  | blaCMY-98\_1\_KC603538 |
|  | blaCMY-99\_1\_KF305673 |
|  | blaCTX-M-1\_4\_AJ416342 |
|  | blaCTX-M-1\_6\_DQ915955 |
|  | blaCTX-M-10\_1\_AY598759 |
|  | blaCTX-M-100\_1\_FR682582 |
|  | blaCTX-M-101\_1\_HQ398214 |
|  | blaCTX-M-102\_1\_HQ398215 |
|  | blaCTX-M-103\_1\_HG423149 |
|  | blaCTX-M-104\_1\_HQ833652 |
|  | blaCTX-M-105\_1\_HQ833651 |
|  | blaCTX-M-106\_1\_HQ913565 |
|  | blaCTX-M-11\_1\_AJ310929 |
|  | blaCTX-M-110\_1\_JF274242 |
|  | blaCTX-M-111\_1\_JF274243 |
|  | blaCTX-M-112\_1\_JF274246 |
|  | blaCTX-M-113\_1\_JF274247 |
|  | blaCTX-M-114\_1\_GQ351346 |
|  | blaCTX-M-116\_1\_JF966749 |
|  | blaCTX-M-117\_1\_JN227085 |
|  | blaCTX-M-12\_1\_DQ821704 |
|  | blaCTX-M-121\_1\_JN790862 |
|  | blaCTX-M-123\_1\_JN790864 |
|  | blaCTX-M-124\_1\_JQ429324 |
|  | blaCTX-M-125\_1\_JQ724542 |
|  | blaCTX-M-126\_1\_AB703103 |
|  | blaCTX-M-129\_1\_JX017364 |
|  | blaCTX-M-13\_2\_AF252623 |
|  | blaCTX-M-130\_1\_JX017365 |
|  | blaCTX-M-131\_1\_JN969893 |
|  | blaCTX-M-132\_1\_JX313020 |
|  | blaCTX-M-134\_1\_JX896165 |
|  | blaCTX-M-136\_1\_KC351754 |
|  | blaCTX-M-139\_1\_KC107824 |
|  | blaCTX-M-14\_1\_AF252622 |
|  | blaCTX-M-14\_5\_AJ416341 |
|  | blaCTX-M-142\_1\_KF240809 |
|  | blaCTX-M-147\_1\_KF513180 |
|  | blaCTX-M-14b\_1\_DQ359215 |
|  | blaCTX-M-14b\_4\_EU274579 |
|  | blaCTX-M-15\_23\_DQ302097 |
|  | blaCTX-M-15\_64\_FJ815288 |
|  | blaCTX-M-15\_70\_FJ815277 |
|  | blaCTX-M-16\_1\_AY029068 |
|  | blaCTX-M-17\_1\_AY033516 |
|  | blaCTX-M-17\_2\_AF454633 |
|  | blaCTX-M-19\_1\_AF325134 |
|  | blaCTX-M-2\_1\_EU622041 |
|  | blaCTX-M-20\_1\_AJ416344 |
|  | blaCTX-M-21\_1\_AJ416346 |
|  | blaCTX-M-22\_1\_HM470254 |
|  | blaCTX-M-22\_3\_EU376964 |
|  | blaCTX-M-23\_1\_AF488377 |
|  | blaCTX-M-24\_1\_EU921824 |
|  | blaCTX-M-24\_2\_EF570050 |
|  | blaCTX-M-24\_8\_EF374096 |
|  | blaCTX-M-25\_1\_AF518567 |
|  | blaCTX-M-26\_1\_AY455830 |
|  | blaCTX-M-27\_1\_EU916273 |
|  | blaCTX-M-28\_6\_AJ549244 |
|  | blaCTX-M-29\_1\_AY267213 |
|  | blaCTX-M-3\_2\_EF437434 |
|  | blaCTX-M-3\_8\_EF382672 |
|  | blaCTX-M-30\_1\_AY292654 |
|  | blaCTX-M-31\_1\_AJ567481 |
|  | blaCTX-M-32\_2\_AM420303 |
|  | blaCTX-M-33\_1\_AY238472 |
|  | blaCTX-M-34\_1\_AY515297 |
|  | blaCTX-M-35\_1\_AB176534 |
|  | blaCTX-M-36\_1\_AB177384 |
|  | blaCTX-M-37\_2\_FN813246 |
|  | blaCTX-M-38\_1\_AY753197 |
|  | blaCTX-M-38\_1\_AY822595 |
|  | blaCTX-M-39\_1\_AY954516 |
|  | blaCTX-M-4\_1\_Y14156 |
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|  | blaVEB-2\_1\_AY027870 |
|  | blaVEB-3\_1\_AY536519 |
|  | blaVEB-4\_1\_EF136375 |
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|  | cfxA2\_1\_AF504914 |
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|  | cphA6\_1\_AY227052 |
|  | cphA7\_1\_AY227053 |
|  | cphA8\_1\_AY261375 |
|  | hugA\_1\_AF324468 |
|  | imiH\_1\_AJ548797 |
|  | imiS\_1\_Y10415 |
|  | mecA\_10\_AB512767 |
|  | mecA\_14\_AB505630 |
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|  | mecA\_2\_FR823292 |
|  | mecA\_4\_AB033763 |
|  | mecA\_5\_CP000046 |
|  | mecA\_6\_FR821779 |
|  | mecA\_7\_BA000018 |
|  | penA\_1\_AF515059 |
|  | POM-1\_1\_GU002295 |
| **Lincosamide** | catA3\_1\_X07848 |
|  | erm(W)\_1\_D14532 |
|  | lsa(B)\_1\_AJ579365 |
|  | msr(A)\_1\_X52085 |
|  | msr(A)\_2\_AB013298 |
|  | msr(A)\_3\_M81802 |
|  | msr(C)\_1\_AY004350 |
|  | msr(C)\_2\_AF313494 |
|  | msr(D)\_2\_AF274302 |
| **Macrolide** | catB2\_1\_AF047479 |
|  | catB3\_1\_AJ009818 |
|  | catB7\_1\_AF036933 |
|  | catB8\_1\_AF227506 |
|  | ere(A)\_4\_AF512546 |
|  | ere(B)\_1\_A15097 |
|  | erm(30)\_1\_AF079138 |
|  | erm(31)\_1\_AF079138 |
|  | erm(32)\_1\_AJ009971 |
|  | erm(33)\_2\_AJ579365 |
|  | erm(34)\_1\_AY234334 |
|  | erm(35)\_1\_AF319779 |
|  | erm(36)\_1\_AF462611 |
|  | erm(A)\_1\_X03216 |
|  | erm(A)\_2\_AF002716 |
|  | erm(A)\_3\_EU348758 |
|  | erm(B)\_1\_JN899585 |
|  | erm(B)\_10\_U86375 |
|  | erm(B)\_11\_M19270 |
|  | erm(B)\_12\_U18931 |
|  | erm(B)\_15\_U48430 |
|  | erm(B)\_18\_X66468 |
|  | erm(B)\_2\_K00551 |
|  | erm(B)\_20\_AF109075 |
|  | erm(B)\_21\_U35228 |
|  | erm(B)\_6\_AF242872 |
|  | erm(B)\_7\_AF368302 |
|  | erm(B)\_9\_AF299292 |
|  | erm(C)\_1\_V01278 |
|  | erm(C)\_10\_Y09002 |
|  | erm(C)\_12\_Y09003 |
|  | erm(C)\_13\_M13761 |
|  | erm(C)\_14\_M12730 |
|  | erm(C)\_15\_U82607 |
|  | erm(C)\_16\_AF019140 |
|  | erm(C)\_2\_M19652 |
|  | erm(C)\_3\_M17990 |
|  | erm(C)\_6\_X82668 |
|  | erm(C)\_9\_Y09001 |
|  | erm(D)\_1\_M29832 |
|  | erm(D)\_2\_L08389 |
|  | erm(D)\_3\_M77505 |
|  | erm(E)\_1\_X51891 |
|  | erm(E)\_2\_M11200 |
|  | erm(F)\_2\_M17124 |
|  | erm(F)\_3\_M17808 |
|  | erm(F)\_4\_M62487 |
|  | erm(G)\_1\_M15332 |
|  | erm(G)\_2\_L42817 |
|  | erm(H)\_1\_M16503 |
|  | erm(N)\_1\_X97721 |
|  | erm(O)\_1\_M74717 |
|  | erm(O)\_2\_AJ223970 |
|  | erm(Q)\_1\_L22689 |
|  | erm(R)\_2\_AY623658 |
|  | erm(S)\_1\_M19269 |
|  | erm(T)\_1\_M64090 |
|  | erm(T)\_2\_AY894138 |
|  | erm(T)\_3\_AF310974 |
|  | erm(T)\_4\_AJ488494 |
|  | erm(V)\_1\_U59450 |
|  | erm(X)\_1\_M36726 |
|  | erm(X)\_2\_X51472 |
|  | erm(X)\_3\_U21300 |
|  | erm(X)\_4\_NC\_005206 |
|  | erm(Y)\_1\_AB014481 |
|  | erm(Z)\_1\_AM709783 |
|  | lmr(A)\_1\_X59926 |
|  | lmr(B)\_1\_X62867 |
|  | lnu(A)\_1\_M14039 |
|  | lnu(B)\_1\_AJ238249 |
|  | lnu(C)\_1\_AY928180 |
|  | lnu(D)\_1\_EF452177 |
|  | lnu(F)\_1\_EU118119 |
|  | lnu(F)\_2\_DQ836009 |
|  | lnu(F)\_3\_AJ561197 |
|  | lsa(A)\_1\_AY225127 |
|  | mph(C)\_1\_AB013298 |
|  | mph(C)\_2\_AF167161 |
|  | mph(D)\_1\_AB048591 |
|  | mph(E)\_3\_EU294228 |
|  | mph(E)\_5\_DQ839391 |
|  | nimH\_1\_FJ969397 |
|  | nimI\_1\_FJ940883 |
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|  | nimJ\_1\_NZ\_JH815495 |
|  | tlr(C)\_1\_M57437 |
| **Sulfonamide** | sul1\_1\_AY224185 |
|  | sul1\_10\_DQ143913 |
|  | sul1\_11\_DQ914960 |
|  | sul1\_14\_AJ517791 |
|  | sul1\_15\_EF667294 |
|  | sul1\_16\_EF667294 |
|  | sul1\_17\_AM746675 |
|  | sul1\_18\_AY260546 |
|  | sul1\_19\_DQ125241 |
|  | sul1\_2\_CP002151 |
|  | sul1\_20\_JF262165 |
|  | sul1\_21\_AJ971344 |
|  | sul1\_22\_AY115475 |
|  | sul1\_23\_AJ621187 |
|  | sul1\_24\_EU117158 |
|  | sul1\_25\_AY878717 |
|  | sul1\_26\_AY524415 |
|  | sul1\_27\_GU562437 |
|  | sul1\_28\_JN790946 |
|  | sul1\_29\_AJ746361 |
|  | sul1\_3\_EU855787 |
|  | sul1\_30\_JF262178 |
|  | sul1\_31\_AM040449 |
|  | sul1\_32\_EF592571 |
|  | sul1\_33\_AJ564903 |
|  | sul1\_5\_EU780013 |
|  | sul1\_7\_FJ715937 |
|  | sul1\_8\_JN581942 |
|  | sul1\_9\_AY963803 |
|  | sul2\_1\_AF542061 |
|  | sul2\_10\_AM183225 |
|  | sul2\_11\_AY232670 |
|  | sul2\_12\_AF497970 |
|  | sul2\_13\_AJ289135 |
|  | sul2\_14\_AJ514834 |
|  | sul2\_15\_FJ968160 |
|  | sul2\_17\_U57647 |
|  | sul2\_18\_AJ830714 |
|  | sul2\_19\_AJ319822 |
|  | sul2\_2\_GQ421466 |
|  | sul2\_20\_AJ830710 |
|  | sul2\_3\_HQ840942 |
|  | sul2\_5\_AY524415 |
|  | sul2\_6\_FN995456 |
|  | sul2\_7\_HM486907 |
|  | sul2\_8\_AJ877041 |
|  | sul2\_9\_FJ197818 |
|  | sul3\_2\_AJ459418 |
|  | sul3\_3\_AY047357 |
|  | sul3\_6\_AB281183 |
| **Tetracycline** | ort(B)\_1\_AF079900 |
|  | ort(B)\_2\_AF061335 |
|  | otr(A)\_1\_X53401 |
|  | otr(C)\_1\_AY509111 |
|  | tcr\_1\_D38215 |
|  | tet(30)\_1\_AF090987 |
|  | tet(31)\_1\_GQ283908 |
|  | tet(31)\_2\_AJ250203 |
|  | tet(32)\_1\_EU722333 |
|  | tet(32)\_2\_EF626943 |
|  | tet(33)\_1\_DQ077487 |
|  | tet(33)\_2\_AY255627 |
|  | tet(33)\_3\_DQ390458 |
|  | tet(34)\_1\_AB061440 |
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|  | tet(36)\_1\_AJ514254 |
|  | tet(37)\_1\_AF540889 |
|  | tet(39)\_1\_KT346360 |
|  | tet(39)\_2\_EU495989 |
|  | tet(39)\_2\_EU495991 |
|  | tet(39)\_3\_DQ195075 |
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|  | tet(40)\_3\_AM419751 |
|  | tet(41)\_1\_AY264780 |
|  | tet(42)\_1\_EU523697 |
|  | tet(43)\_1\_GQ244501 |
|  | tet(44)\_1\_NZ\_ABDU01000081 |
|  | tet(44)\_2\_FN594949 |
|  | tet(A)\_2\_X00006 |
|  | tet(A)\_3\_AY196695 |
|  | tet(A)\_4\_AJ517790 |
|  | tet(A)\_5\_AJ419171 |
|  | tet(A)\_6\_AJ313332 |
|  | tet(B)\_3\_AP000342 |
|  | tet(B)\_4\_AF326777 |
|  | tet(B)\_5\_AJ277653 |
|  | tet(C)\_10\_AY043299 |
|  | tet(C)\_2\_NC\_003123 |
|  | tet(C)\_5\_NC\_003213 |
|  | tet(C)\_6\_Y19114 |
|  | tet(C)\_9\_AY046276 |
|  | tet(D)\_1\_AF467077 |
|  | tet(D)\_3\_D16172 |
|  | tet(D)\_5\_X65876 |
|  | tet(E)\_1\_Y19116 |
|  | tet(E)\_2\_EF471995 |
|  | tet(E)\_3\_L06940 |
|  | tet(E)\_5\_CP000645 |
|  | tet(G)\_1\_AJ276217 |
|  | tet(G)\_2\_AF133139 |
|  | tet(G)\_3\_S52437 |
|  | tet(G)\_4\_AF133140 |
|  | tet(G)\_5\_AF071555 |
|  | tet(H)\_1\_Y16103 |
|  | tet(H)\_2\_AJ245947 |
|  | tet(H)\_3\_Y15510 |
|  | tet(H)\_4\_U00792 |
|  | tet(J)\_1\_ACLE01000065 |
|  | tet(J)\_2\_AF038993 |
|  | tet(K)\_4\_U38428 |
|  | tet(K)\_5\_J01764 |
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|  | tet(L)\_4\_M11036 |
|  | tet(L)\_5\_D00006 |
|  | tet(L)\_6\_X08034 |
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|  | tet(L)\_8\_X60828 |
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|  | tet(M)\_12\_FR671418 |
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|  | tet(M)\_3\_U08812 |
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|  | tet(M)\_5\_U58985 |
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|  | tet(M)\_7\_FN433596 |
|  | tet(M)\_8\_X04388 |
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|  | tet(O)\_1\_M18896 |
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|  | tet(Q)\_2\_X58717 |
|  | tet(Q)\_3\_U73497 |
|  | tet(Q)\_4\_Z21523 |
|  | tet(S)\_1\_DQ377340 |
|  | tet(S)\_2\_L09756 |
|  | tet(S)\_3\_X92946 |
|  | tet(T)\_1\_L42544 |
|  | tet(T)\_2\_AY660530 |
|  | tet(U)\_1\_U01917 |
|  | tet(V)\_1\_AF030344 |
|  | tet(W)\_1\_DQ060146 |
|  | tet(W)\_2\_AY049983 |
|  | tet(W)\_4\_AJ427422 |
|  | tet(W)\_5\_AJ427421 |
|  | tet(W)\_6\_FN396364 |
|  | tet(X)\_1\_GU014535 |
|  | tet(X)\_2\_M37699 |
|  | tet(X)\_3\_AB097942 |
|  | tet(Y)\_1\_EF495198 |
|  | tet(Y)\_5\_AB089606 |
|  | tet(Z)\_2\_AF121000 |
|  | tet(Z)\_3\_AY222818 |
|  | tetA(P)\_1\_AB054980 |
|  | tetA(P)\_2\_HQ399624 |
|  | tetA(P)\_3\_L20800 |
|  | tetA(P)\_4\_AB001076 |
|  | tetB(P)\_3\_NC\_010937 |