



The Open Microbiology Journal

Content list available at: <https://openmicrobiologyjournal.com>

Supplementary Material



Identification of Novel Mobile Genetic Elements Associated with Resistance to Macrolide and Lincosamide in *Streptococcus dysgalactiae* subsp. *equisimilis*

Alexandra Kireeva¹ and Alexander Dmitriev^{1,*}

¹Department of Molecular Microbiology, Institute of Experimental Medicine, Saint-Petersburg, Russia

Table S1. Oligonucleotide primer pairs used.

Gene	Primer		Reference	Product Size (bp)
	Designation	Sequence (5'-3')		
Erythromycin resistance genes				
<i>erm</i> (B)	ERMB1	GAAAAGGTA CTCAACCAAATA AGTAACGGTACTTAAATTGTTTAC	1	639
	ERMB2			
<i>erm</i> (TR)	TR2	AATTGATTTTTAGTAAAAAGAAC	2	530
	TR1	ATAGAAATTGGGTCAGGAAAAGG		
<i>mef</i> (A/E)	MEFA1	AGTATCATTAACTACTAGTGC	1	348
	MEFA2	TTCTTCTGGTACTAAAAGTGG		
Tetracycline resistance genes				
<i>tet</i> (M)	TETM2	GAACTCGAACAAGAGGAAAGC	3	740
	TETM3	ATGGAAGCCCAGAAAGGAT		
<i>tet</i> (O)	TETO1	AACTTAGGCATTCTGGCTCAC	3	519
	TETO2	TCCCACTGTCCATATCGTCA		
<i>tet</i> (S)	TETS-FW	GAAAGCTTACTATACAGTAGC	4	169
	TETS-RV	AGGAGTATCTACAATATTTAC		
<i>tet</i> (T)	TETT-FW	AAGGTTTATTATATATAAAAAGTG	4	169
	TETT-RV	AGGTGTATCTATGATATTTAC		
mega element				
up <i>mef</i> down orf5	MEGA-for	GCTAGTCAAGGAGTAAAACG	5	5509
	MEGE-rev	CTAATAGACGAAAGGGTGTG		
Tn917				
<i>erm</i> (B) <i>tnpA</i>	ERMB1	GAAAAGGTA CTCAACCAAATA	1	2329
	O22	GTCCCAGTCCCATGGAAGC		
Tn6002				
orf20 IR-orf18/19	J11	GAACTCGAACAAGAGGAAAGC	7	3649
	J12	GATGTACTTCATGGCGACG		

REFERENCES

1. Sutcliffe J, Grebe T, Tait-Kamradt A et al. Detection of erythromycin-resistant determinants by PCR. *Antimicrob Agents Chemother* 1996; 40:2562–6.

2. Kataja J, Seppala H, Skurnik M, Sarkkinen H, Huovinen P. Different erythromycin resistance mechanisms in group C and group G streptococci. *Antimicrobial Agents and*

Chemotherapy. Jun 1998;42(6):1493-1494.

3. Olsvik B, Olsen I, Tenover FC. Detection of tet(M) and tet(O) using the polymerase chain reaction in bacteria isolated from patients with periodontal disease. *Oral Microbiol Immunol* 1995; 10:87–92.

4. Aminov RI, Garrigues-Jeanjean N, Mackie RI. Molecular ecology of tetracycline resistance: development and

validation of primers for detection of tetracycline resistance genes encoding ribosomal protection proteins. *Appl Environ Microbiol* 2001; 67:22-32.

5. Brenciani A, Tibery E, Tili E, Mingoia M, Palmieri C, Varaldo P, Giovanetti E. Genetic determinants and elements associated with antibiotic resistance in viridans group streptococci. *J. Antimicrobial Chemotherapy*. 2013; 69:1197-1204. doi:10.1093/jac/dkt495

6. Poyart C, Quesne G, Acar P, et al. Characterization of the Tn916-like transposon Tn3872 in a strain of *Abiotrophia defectiva* (*Streptococcus defectivus*) causing sequential episodes of endocarditis in a child. *Antimicrob Agents Chemother* 2000; 44:790–3.

7. Cochetti I, Tili E, Mingoia M et al. erm(B)-carrying elements in tetracycline-resistant pneumococci and correspondence between Tn1545 and Tn6003. *Antimicrob Agents Chemother* 2008; 52:1285–90.

© 2023 Kireeva and Dmitriev

This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International Public License (CC-BY 4.0), a copy of which is available at: <https://creativecommons.org/licenses/by/4.0/legalcode>. This license permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.