

TABLE S1 Antimicrobial susceptibility profiles of bacterial hosts carrying *tet(X4)*

Strains	<i>E. cloacae</i> TECL_1	<i>E. cloacae</i> TECL_2	<i>E. coli</i> J53/pTECL_1- 290k-tetX4	<i>E. coli</i> J53/pTECL_2-190k- tetX4	<i>E. coli</i> J53
Description					
Source	Pig farm	Pig farm	/	/	/
Collection date	2020	2020	/	/	/
	Donor of <i>tet(X4)</i> - carrying plasmid pTECL_1-190k- tetX4	Donor of <i>tet(X4)</i> - carrying plasmid pTECL_2-290k- tetX4	Transconjugant	Transconjugant	Recipient
MICs(mg/L) ^a					
TET	256	256	128	128	≤1
TGC	32	16	32	32	0.25
RD	16	> 128	8	16	/
AMP	> 256	> 256	8	8	/
CHL	> 128	> 128	128	128	8
CIP	4	4	≤0.03	≤0.03	≤0.03
IMP	≤0.25	≤0.25	0.5	0.5	0.5
CAZ	2	32	≤1	≤1	≤1
GEN	≤1	256	≤1	≤1	≤1
AMK	≤1	2	2	2	≤1
CTX	≤1	256	≤1	≤1	≤1
FOS	256	≤16	≤16	≤16	/
CT	0.25	> 16	0.25	0.25	≤0.125
SXT	≤0.25	> 64	≤0.25	≤0.25	≤0.25

a. TET, tetracycline; TGC, tigecycline; RD, rifamycin; AMP, ampicillin; CHL, chloramphenicol; CIP, ciprofloxacin; IMP, imipenem; CAZ, ceftazidime; GEN, gentamicin; AMK, amikacin; CTX, cefotaxime; FOS, fosfomycin; CT, colistin sulphate; SXT, trimethoprim-sulfamethoxazole

TABLE S2 The primers for pTECL_2-190k-tetX4

Plasmid	Primer	Sequence (5' to 3')	Amplified product size (bp)	Position (bp)
pTECL_2-190k-tetX4	pTECL2-1-F	CGCCTTGCTGGTTGATGAAG	802	55191-56000
	pTECL2-1-R	TGGAAGCGGGTTAGGTTGAC		
	pTECL2-2-F	GTGACGGGATTGGCAAGGTA	841	60459-61329
	pTECL2-2-R	ACATGGGCATCGACATAGCC		
	pTECL2-3-F	CTGCTATTTGAGCGCCATGC	582	63632-64215
	pTECL2-3-R	GTATCGAAGCGCTGAACGTC		

TABLE S3 The antibiotic resistance gene of plasmids carrying *tet(X4)*

Plasmid	GenBank accession number	Antibiotic resistance gene						
		Tetracyclines-resistance gene			Chloramphenicol-resistance gene		Quinolones-resistance gene	
		<i>tet(A)</i>	<i>tet(M)</i>	<i>tet(X4)</i>	<i>floR</i>	<i>cmlA1</i>	<i>qnrS1</i>	<i>qnrS2</i>
pTECL_2-190k-tetX4	MZ773210.1	0	0	1	1	0	1	0
pLHM10-1	CP037909.1	0	0	1	0	0	0	0
pYSP8-1	CP037911.1	0	0	1	1	0	1	0
pG3X16-2-3	CP038140.1	1	1	1	1	1	0	0
pYY76-1-2	CP040929.1	1	0	1	1	0	0	0
p54-tetX	CP041286.1	1	1	1	1	0	1	0
pYPE12-101k-tetX4	CP041443.1	1	1	1	1	0	1	0
pYPE10-190k-tetX4	CP041449.1	0	0	1	1	0	1	0
pYPE3-92k-tetX4	CP041453.1	0	0	1	1	0	0	0
pNT1F31-tetX4	CP045188.1	1	1	1	1	0	1	0
p1916D18-1	CP045998.1	1	0	1	1	0	0	0
p1916D6-2	CP046002.1	1	0	1	1	0	0	0
p1919D3-1	CP046004.1	1	0	1	1	1	0	0
p1919D62-1	CP046007.1	0	0	1	1	0	1	0
pT16R-1	CP046717.1	0	0	1	1	0	1	0
pZF31-tetX-119kb	CP047460.1	1	1	1	1	1	1	0
pZF34-tetX-114kb	CP047466.1	0	1	1	1	1	1	0
p2EC1-1	CP047572.1	0	0	1	1	0	0	0
p94EC-2	CP047578.1	0	0	1	1	0	0	0
pEC931_tetX	CP049121.1	1	0	1	1	0	0	0
pT28R-1	CP049354.1	0	0	1	1	0	1	0
pCD58-3-1	CP050037.1	1	0	1	1	0	1	0
pCD63-2-1	CP050041.1	0	0	1	1	0	1	0
pCD74-2-2	CP050046.1	1	0	1	1	0	1	0
pSTB20-1T	CP050174.1	1	1	1	1	0	1	0
pHNCF11W-tetX4	CP053047.1	1	0	1	1	0	0	0
pSY3626C1_315k	CP059044.1	0	1	1	1	0	1	0
pSY3626_190k_tetX	CP059284.1	0	0	1	1	0	1	0
pSal21GXH-tetX4	CP060586.1	1	1	1	1	1	1	0
pPK5074-tetX	CP072807.1	0	0	1	1	0	0	0
pNT1F10-tetX4	CP075463.1	1	1	1	1	0	1	0
pNT1N34-tetX4	CP075467.1	1	1	1	1	0	1	0
pNT1W22-tetX4	CP075470.1	1	1	1	1	0	1	0
pNT1F25-tetX4	CP075471.1	1	1	1	1	0	1	0
pNT1N28-tetX4	CP075473.1	1	1	1	1	0	1	0
pNT1W25-tetX4	CP075479.1	1	1	1	1	0	1	0
pNT1N31-tetX4	CP075481.1	1	1	1	1	0	1	0
pNT1N25-tetX4	CP075485.1	1	1	1	1	0	1	0
pNT1F34-tetX4	CP075486.1	1	1	1	1	0	1	0

pNTT31XS-tetX4	CP077430.1	0	0	1	0	0	0	0
pPK8217-tetX	CP080124.1	0	0	1	1	0	0	0
pPK8568-tetX	CP080129.1	0	0	1	1	0	0	0
pPK8277-tetX	CP080134.1	0	0	1	1	0	0	0
pPK8241-tetX	CP080140.1	0	0	1	0	0	0	0
pPK8276-tetX	CP080147.1	0	0	1	1	0	0	0
pPK8261-tetX	CP080156.1	0	0	1	1	0	0	0
pPK8275-tetX	CP080164.1	0	0	1	1	0	0	0
pPK8566-tetX	CP080175.1	0	0	1	1	0	0	0
pPK5086-tetX	CP080371.1	0	0	1	1	0	0	0
pNUITM-VK5_mdr	LC633285.1	0	0	1	1	0	1	0
p47EC	MK134376.1	1	1	1	1	0	1	0
p2019XSD11-190	MN101856.1	0	0	1	1	0	1	0
p16EC-9K	MN381965.1	0	0	1	0	0	0	0
pEC05-X4	MN436006.1	1	0	1	1	0	0	0
pEC12-X4	MN436007.1	1	0	1	1	0	0	0
pRB3-1_31K_tetX	MT197111.1	1	0	1	1	0	0	0
pRF173-1_87k_tetX	MT219816.1	0	0	1	0	0	0	0
pRF148-2_101k_tetX	MT219817.1	1	1	1	1	0	1	0
pRF148-1_119k_tetX	MT219818.1	1	1	1	1	1	0	0
pRF52-1_119k_tetX	MT219819.1	1	1	1	1	1	0	0
pRF108-2_97k_tetX	MT219820.1	1	1	1	1	0	1	0
pRF45-1_31k_tetX	MT219821.1	1	0	1	1	0	0	0
pRF14-1_50k_tetX	MT219822.1	0	0	1	0	0	1	0
pRF10-1_119k_tetX	MT219823.1	1	1	1	0	1	0	0
pRT18-1_294k_tetX	MT219824.1	0	0	1	1	0	1	0
pRW7-1_235k_tetX	MT219825.1	0	0	1	1	0	1	1
pRW8-1_122k_tetX	MT219826.1	1	1	1	1	1	0	0
p2GS3-tetX4	MW940614.1	0	0	1	0	0	1	0
pAB4-4-tetX4	MW940615.1	0	0	1	1	0	1	0
pHN10R-tetX4	MW940616.1	1	0	1	1	0	0	0
pHS2-1-tetX4	MW940617.1	0	0	1	0	0	0	0
pHS10-1-tetX4	MW940618.1	1	0	1	1	0	0	0
pHS19-2-tetX4	MW940619.1	1	0	1	1	0	0	0
pSC4R-tetX4	MW940620.1	0	0	1	1	0	0	1
pSDP9R-tetX4	MW940621.1	0	0	1	0	0	0	0
pSH9W-tetX4	MW940622.1	1	0	1	1	0	0	0
pSH12R-tetX4	MW940623.1	0	0	1	0	0	0	0
pSX5G-tetX4	MW940624.1	1	0	1	1	0	0	0
pSX8G-tetX4	MW940625.1	0	0	1	1	0	1	0
pSZ5R-tetX4	MW940626.1	1	0	1	1	0	0	0
pSZ6R-tetX4	MW940627.1	0	0	1	1	0	1	0
pSZ10R-tetX4	MW940628.1	1	1	1	1	1	0	0
pSZ11R-tetX4	MW940629.1	1	0	1	1	0	0	0

pNT1W22-tetX4	0	0	0	0	0	0	0	0	1	0
pNT1F25-tetX4	0	0	0	0	0	0	0	0	1	0
pNT1N28-tetX4	0	0	0	0	0	0	0	0	1	0
pNT1W25-tetX4	0	0	0	0	0	0	0	1	0	0
pNT1N31-tetX4	0	0	0	0	0	0	0	0	1	0
pNT1N25-tetX4	0	0	0	0	0	0	0	0	1	0
pNT1F34-tetX4	0	0	0	0	0	0	0	0	1	0
pNTT31XS-tetX4	0	0	0	0	0	0	0	0	0	0
pPK8217-tetX	0	0	0	0	0	0	0	0	0	1
pPK8568-tetX	0	0	0	0	0	1	0	0	0	0
pPK8277-tetX	0	0	0	0	0	0	0	0	0	1
pPK8241-tetX	0	0	0	0	0	0	0	0	0	0
pPK8276-tetX	0	0	0	0	0	0	0	0	0	0
pPK8261-tetX	0	0	0	0	0	0	0	0	0	1
pPK8275-tetX	0	0	0	0	0	0	0	0	0	1
pPK8566-tetX	0	0	0	0	0	0	0	0	0	1
pPK5086-tetX	0	0	0	0	0	0	0	0	0	1
pNUITM-VK5_mdr	1	0	1	1	0	0	0	0	0	0
p47EC	0	0	0	0	0	0	0	0	1	0
p2019XSD11-190	0	0	0	0	0	0	0	0	1	0
p16EC-9K	0	0	0	0	0	0	0	0	0	0
pEC05-X4	0	0	0	0	0	0	0	0	0	0
pEC12-X4	0	0	0	0	0	0	0	0	0	0
pRB3-1_31k_tetX	0	0	0	0	0	0	0	0	0	0
pRF173-1_87k_tetX	0	0	0	0	0	0	0	0	0	0
pRF148-2_101k_tetX	0	0	0	0	0	0	0	0	1	0
pRF148-1_119k_tetX	0	0	0	0	0	0	0	0	1	0
pRF52-1_119k_tetX	0	0	0	0	0	0	0	0	0	0
pRF108-2_97k_tetX	0	0	0	0	0	0	0	0	1	0
pRF45-1_31k_tetX	0	0	0	0	0	0	0	0	0	0
pRF14-1_50k_tetX	0	0	0	0	0	0	1	0	0	0
pRF10-1_119k_tetX	0	0	0	0	0	0	0	0	0	0
pRT18-1_294k_tetX	0	0	0	0	0	0	0	0	1	0
pRW7-1_235k_tetX	0	0	0	0	0	0	0	0	1	0
pRW8-1_122k_tetX	0	0	0	0	0	0	0	0	1	0
p2GS3-tetX4	0	0	0	0	0	0	0	0	0	0
pAB4-4-tetX4	0	0	0	0	0	0	0	0	1	0
pHN10R-tetX4	0	0	0	0	1	0	0	0	0	0

p94EC-2	0	1	0	0	0	0	0	0	1	0
pEC931_tetX	0	0	0	1	0	0	0	0	0	0
pT28R-1	0	0	0	0	1	0	0	0	0	0
pCD58-3-1	0	0	0	0	0	0	0	0	0	1
pCD63-2-1	0	0	0	1	0	0	0	0	0	0
pCD74-2-2	0	0	0	0	0	0	0	0	0	1
pSTB20-1T	0	0	0	0	0	0	0	0	0	0
pHNCF11W-tetX4	0	0	0	1	0	0	0	0	0	0
pSY3626C1_315k	1	0	0	0	1	1	0	0	0	0
pSY3626_190k_tetX	0	0	0	0	1	0	0	0	0	0
pSal21GXH-tetX4	0	0	0	1	1	0	0	0	0	0
pPK5074-tetX	0	0	0	0	1	1	0	1	0	1
pNT1F10-tetX4	0	0	0	0	0	0	0	0	0	0
pNT1N34-tetX4	0	0	0	0	0	0	0	0	0	0
pNT1W22-tetX4	0	0	0	0	0	0	0	0	0	0
pNT1F25-tetX4	0	0	0	0	0	0	0	0	0	0
pNT1N28-tetX4	0	0	0	0	0	0	0	0	0	0
pNT1W25-tetX4	0	0	0	0	0	0	0	0	0	0
pNT1N31-tetX4	0	0	0	0	0	0	0	0	0	0
pNT1N25-tetX4	0	0	0	0	0	0	0	0	0	0
pNT1F34-tetX4	0	0	0	0	0	0	0	0	0	0
pNTT31XS-tetX4	0	0	0	0	0	0	0	0	0	0
pPK8217-tetX	0	0	0	0	1	1	0	1	0	1
pPK8568-tetX	0	0	0	0	0	0	0	0	0	0
pPK8277-tetX	0	0	0	0	0	0	0	0	0	0
pPK8241-tetX	0	0	0	0	0	0	0	0	0	0
pPK8276-tetX	0	0	0	0	0	0	0	0	0	0
pPK8261-tetX	0	0	0	0	0	0	0	0	0	0
pPK8275-tetX	0	0	0	0	0	0	0	0	0	0
pPK8566-tetX	0	0	0	0	0	0	0	0	0	0
pPK5086-tetX	0	0	0	0	0	0	0	0	0	0
pNUITM-VK5_mdr	1	0	1	0	1	0	0	1	0	1
p47EC	0	0	0	1	0	1	0	0	0	0
p2019XSD11-190	0	0	0	0	1	0	0	0	0	0
p16EC-9K	0	0	0	0	0	0	0	0	0	0
pEC05-X4	0	0	0	1	0	0	0	0	0	0
pEC12-X4	0	0	0	1	0	0	0	0	0	0
pRB3-1_31K_tetX	0	0	0	1	0	0	0	0	0	0

pPK8276-tetX	0	0	0	0	0	0	0	0
pPK8261-tetX	0	1	0	0	0	0	0	0
pPK8275-tetX	0	1	0	0	0	0	0	0
pPK8566-tetX	0	1	0	0	0	0	0	0
pPK5086-tetX	0	1	0	0	0	0	0	0
pNUITM-VK5_mdr	0	0	0	1	1	0	0	0
p47EC	0	0	0	0	0	1	1	0
p2019XSD11-190	0	0	0	0	0	0	0	1
p16EC-9K	0	0	0	0	0	0	0	0
pEC05-X4	0	0	0	0	0	0	1	0
pEC12-X4	0	0	0	0	0	0	1	0
pRB3-1_31K_tetX	0	0	0	0	0	0	1	0
pRF173-1_87k_tetX	0	0	0	0	0	0	0	0
pRF148-2_101k_tetX	1	0	0	0	0	1	0	0
pRF148-1_119k_tetX	0	1	0	0	0	1	0	0
pRF52-1_119k_tetX	0	1	0	0	0	1	0	0
pRF108-2_97k_tetX	1	0	0	0	0	1	0	0
pRF45-1_31k_tetX	0	0	0	0	0	0	1	0
pRF14-1_50k_tetX	0	0	0	0	0	0	0	0
pRF10-1_119k_tetX	0	1	0	0	0	1	0	0
pRT18-1_294k_tetX	0	0	0	0	0	0	0	1
pRW7-1_235k_tetX	0	0	0	0	0	0	0	1
pRW8-1_122k_tetX	0	1	0	0	0	1	0	0
p2GS3-tetX4	0	0	0	0	1	0	0	0
pAB4-4-tetX4	0	0	0	0	0	0	0	1
pHN10R-tetX4	0	0	0	0	0	0	1	0
pHS2-1-tetX4	0	0	0	0	0	0	0	0
pHS10-1-tetX4	0	0	0	0	0	0	1	0
pHS19-2-tetX4	0	0	0	0	0	0	1	0
pSC4R-tetX4	0	0	0	0	0	0	0	0
pSDP9R-tetX4	0	0	0	0	0	0	0	0
pSH9W-tetX4	0	0	0	0	0	0	1	0
pSH12R-tetX4	0	0	0	0	0	0	0	0
pSX5G-tetX4	0	0	0	0	0	0	1	0
pSX8G-tetX4	0	0	0	0	0	0	0	1
pSZ5R-tetX4	0	0	0	0	0	0	1	0
pSZ6R-tetX4	0	0	0	0	0	0	0	1
pSZ10R-tetX4	0	1	0	0	0	1	0	0
pSZ11R-tetX4	0	0	0	0	0	0	1	0

pAB12-1-tetX4	0	0	0	0	1	0	0	0
pHN13R-tetX4	0	0	0	0	1	0	0	0

Plasmid	Antibiotic resistance gene				
	Macrolides-resistance gene			Fosfomycin-resistance gene	
	<i>erm(42)</i>	<i>erm(B)</i>	<i>mph(A)</i>	<i>mef(B)</i>	<i>fosA3</i>
pTECL_2-190k-tetX4	0	0	0	0	0
pLHM10-1	0	0	0	0	0
pYSP8-1	0	1	0	0	0
pG3X16-2-3	1	0	0	0	0
pYY76-1-2	0	0	0	0	0
p54-tetX	0	0	0	1	0
pYPE12-101k-tetX4	0	0	0	1	0
pYPE10-190k-tetX4	0	0	0	0	0
pYPE3-92k-tetX4	0	0	0	1	0
pNT1F31-tetX4	0	0	0	1	0
p1916D18-1	0	0	0	0	0
p1916D6-2	0	0	0	0	0
p1919D3-1	0	0	0	0	0
p1919D62-1	0	0	0	0	0
pT16R-1	0	0	0	0	0
pZF31-tetX-119kb	1	0	0	0	0
pZF34-tetX-114kb	1	0	0	0	0
p2EC1-1	0	0	0	0	0
p94EC-2	0	0	0	0	1
pEC931_tetX	0	0	0	0	0
pT28R-1	0	0	0	0	0
pCD58-3-1	0	0	0	0	0
pCD63-2-1	0	0	0	0	0
pCD74-2-2	0	0	0	0	0
pSTB20-1T	0	0	0	1	0
pHNCF11W-tetX4	0	0	0	0	0
pSY3626C1_315k	0	0	0	0	0
pSY3626_190k_tetX	0	0	0	0	0
pSal21GXH-tetX4	0	0	0	0	0
pPK5074-tetX	0	0	0	0	0
pNT1F10-tetX4	0	0	0	1	0
pNT1N34-tetX4	0	0	0	1	0
pNT1W22-tetX4	0	0	0	1	0
pNT1F25-tetX4	0	0	0	1	0
pNT1N28-tetX4	0	0	0	1	0
pNT1W25-tetX4	0	0	0	1	0
pNT1N31-tetX4	0	0	0	1	0
pNT1N25-tetX4	0	0	0	1	0

pNT1F34-tetX4	0	0	0	1	0
pNTT31XS-tetX4	0	0	0	0	0
pPK8217-tetX	0	0	0	0	0
pPK8568-tetX	0	0	0	0	0
pPK8277-tetX	0	0	1	0	1
pPK8241-tetX	0	0	0	0	0
pPK8276-tetX	0	0	0	0	0
pPK8261-tetX	0	0	1	0	1
pPK8275-tetX	0	0	1	0	1
pPK8566-tetX	0	0	1	0	1
pPK5086-tetX	0	0	1	0	1
pNUITM-VK5_mdr	0	0	0	0	0
p47EC	1	0	0	0	0
p2019XSD11-190	0	0	0	0	0
p16EC-9K	0	0	0	0	0
pEC05-X4	0	0	0	0	0
pEC12-X4	0	0	0	0	0
pRB3-1_31K_tetX	0	0	0	0	0
pRF173-1_87k_tetX	1	0	0	0	0
pRF148-2_101k_tetX	0	0	0	1	0
pRF148-1_119k_tetX	0	0	1	0	0
pRF52-1_119k_tetX	1	0	0	0	0
pRF108-2_97k_tetX	0	0	0	1	0
pRF45-1_31k_tetX	0	0	0	0	0
pRF14-1_50k_tetX	0	0	0	0	0
pRF10-1_119k_tetX	1	0	0	0	0
pRT18-1_294k_tetX	0	0	0	0	0
pRW7-1_235k_tetX	0	0	0	0	0
pRW8-1_122k_tetX	0	0	1	0	0
p2GS3-tetX4	0	0	0	0	0
pAB4-4-tetX4	0	0	0	0	0
pHN10R-tetX4	0	0	0	0	0
pHS2-1-tetX4	0	0	0	0	0
pHS10-1-tetX4	0	0	0	0	0
pHS19-2-tetX4	0	0	0	0	0
pSC4R-tetX4	0	0	0	0	0
pSDP9R-tetX4	0	0	0	0	0
pSH9W-tetX4	0	0	0	0	0
pSH12R-tetX4	0	0	0	0	0
pSX5G-tetX4	0	0	0	0	0
pSX8G-tetX4	0	0	0	0	0
pSZ5R-tetX4	0	0	0	0	0
pSZ6R-tetX4	0	0	0	0	0
pSZ10R-tetX4	1	0	1	0	0

pSZ11R-tetX4	0	0	0	0	0
pAB12-1-tetX4	1	0	0	0	0
pHN13R-tetX4	1	0	0	0	0
