

Supplementary material to the article

**Silver resistance genes are overrepresented among *Escherichia coli* isolates with
CTX-M-production**

Susanne Sütterlin^{1#}, Petra Edquist¹, Linus Sandegren², Marlen Adler², Thomas Tängdén³,
Mirva Drobni³, Björn Olsen³, Åsa Melhus¹

Department of Medical Sciences/¹Sections of Clinical Bacteriology and ³Infectious Diseases,
²Department of Medical Biochemistry and Microbiology, Uppsala University, Uppsala,
Sweden

Antibiotic susceptibility of human and avian isolates in relation to phenotypic characteristics of carried beta-lactamases.

Human isolates	Antibiotics	S (%)	I (%)	R (%)
ESBL-positive (<i>n</i> =53)	Cefotaxime	0	0	100
	Piperacillin/tazobactam	60	30	10
	Meropenem	100	0	0
	Ciprofloxacin	53	0	47
	Co-trimoxazole	25	2	73
	Gentamicin	58	21	21
ESBL-negative (<i>n</i> =52)	Cefotaxime	100	0	0
	Piperacillin/tazobactam	96	2	2
	Meropenem	100	0	0
	Ciprofloxacin	100	0	0
	Co-trimoxazole	83	0	17
	Gentamicin	98	2	0
Avian isolates				
ESBL-positive (<i>n</i> =19)	Cefotaxime	0	0	100
	Piperacillin/tazobactam	100	0	0
	Meropenem	100	0	0
	Ciprofloxacin	68	0	32
	Co-trimoxazole	63	0	37
	Gentamicin	95	5	0
ESBL-negative (<i>n</i> =92)	Cefotaxime	100	0	0
	Piperacillin/tazobactam	100	0	0
	Meropenem	100	0	0
	Ciprofloxacin	100	0	0
	Co-trimoxazole	96	0	4
	Gentamicin	100	0	0

Primers used in this study

Target	Primer pair	Product size (bp)	Annealing temp (°C)	Reference
sil	SilE-F 5'-GTACTCCCCCGGACATCACTAATT-3' SilE-R 5'-GGCCAGACTGACCGTTATT-3'	400	55	2008, Percival, OW Man
	SilS-F 5'-GGAGATCCCCGGATGCATAGCAA-3' SilS-R 5'-GTTTGCTGCATGACAG- GCTAAAGACATC-3'	1500	57	
	SilP-F 5'- CATGACATATCCTGAAGACAGAAAATGC-3' SilP-R 5'-CGGGCAGACCAGCAATAACAGATA- 3'	2500	57	
merA	merA1-F 5'-ACC ATC GGC GGC ACC TGC GT- '3 merA5-R 5'-CC ATC GTC AGG TAG GGG AAC AA-3'	1253	64	2006, Novais, AAC
CTX-M I	CTX-3F5'-AAT CAC TGC GCC AGT TCA CGC T-3' CTX-3R 5'-GAA CGT TTC GTC TCC CAG CTG T-3'	479	62	2008, Lytsy, APMIS
CTX-M IV	CTX-14F 5'-TAC CGC AGA TAA TAC GCA GGT G-3' CTX-14R 5'-CAG CGT AGG TTC AGT GCG ATC C-3'	474	62	2008, Lytsy, APMIS
TEM	TEM-F 5'-ATG AGT ATT CAA CAT TTC CGT-3' TEM-R 5'-TTA CCA ATG CTT AAT CAG TGA- 3'	861	50	2008, Lytsy, APMIS
SHV	SHV-F2 5'-AAC GGA ACT GAA TGA GGC GCT- 3'	141	62	2008, Lytsy, APMIS
	SHV-R2 5'-TCC ACC ATC CAC TGC AGC AGC T-3'	860	55	
	SHV-F3 5'-ATG CGT TAT ATT CGC CTG TG-3' SHV-R1 5'-TAG CGT TGC CAG TGC TCG-3'			
papB	O25pabBspe.F 5' -TCC AGC AGG TGC TGG ATC GT-3' O25pabBspe.R 5' -GCG AAA TTT TTC GCC GTA CTG T-3'	347	65	2009, Clermont, JAC

Results of MLST and eBURST analysis for the randomly chosen isolats (total n=31)

Clonal	Isolates			MLST
Complex	<i>silE</i> -positive (n=13)	<i>silE</i> - negative (n=8)	avian (n=10)	
ST10 complex		n=5		ST44, ST46, ST167, ST540, ST1314
	n=4			ST10 (n=2, one ESBL-negative), ST1312, ST1598
ST58 complex	n=6			ST58, ST155, ST205, ST424, ST940 (n=2)
ST88 complex		n=1		ST625
			n=1	ST90
ST131 complex			n=1	ST131
ST38 complex		n=1		ST38
ST648 complex		n=1	n=1	ST648 (n=2)
ST127 complex	n=1			ST127
ST457 complex			n=1	ST457
ST681 complex			n=1	ST681
ST1140 complex			n=2	ST1140 (n=2)
ST665 complex			n=1	ST665
	n=1			ST409 (ESBL-negative)
	n=1			ST388
			n=1	ST1199
			n=1	ST1143