

**Supplementary Materials:**

**Table S1:** Characteristics of the *E. coli* collected from companion animals

Isolate	Animal	Age/ month	Clinical status	Serotype1	DEC	ESBL phenotype	Drug resistance spectrum	Resistance genes	Virulence genes
31-2	dog	2	diarrhea	NI	non- DEC	+		<i>bla</i> <sub>CTX-M</sub>	<i>eaeA</i> , <i>irp2</i>
L86-1	cat	2	diarrhea	NI	non- DEC	+	SXT-TET-DOX- AM-AMX-CRO- CEX	<i>bla</i> <sub>CTX-M</sub> , <i>oqxA</i>	<i>eaeA</i> , <i>irp2</i>
12-3	cat	36	diarrhea	NI	non- DEC	+	DOX	<i>bla</i> <sub>SHV</sub> , <i>bla</i> <sub>CTX-M</sub> , <i>aac</i> (6')-Ib- <i>cr</i>	<i>irp2</i>
78-1	dog	2	diarrhea	O114:K90	EPEC	+	SXT-TET-DOX- AM-AMX-CRO- CEX	<i>bla</i> <sub>CTX-M</sub> , <i>aac</i> (6')-Ib- <i>cr</i> , <i>oqxA</i> , <i>qnrS</i> <i>bla</i> <sub>SHV</sub> ,	<i>eaeA</i> , <i>EAST1</i> , <i>irp2</i>
14-1	cat	24	healthy	NI	non- DEC	+	SXT-TET-DOX- GM-AM-AMX- ENR-CRO-CEX	<i>bla</i> <sub>CTX-M</sub> , <i>aaC4</i> , <i>aac</i> (6')-Ib- <i>cr</i> , <i>qnrA</i> , <i>qnrB</i> <i>bla</i> <sub>SHV</sub> ,	<i>eaeA</i>
33-2	cat	2	healthy	O128:K67	EPEC	+	AM-AMX-CRO- CEX	<i>bla</i> <sub>CTX-M</sub> , <i>aac</i> (6')-Ib- <i>cr</i>	<i>eaeA</i> , <i>irp2</i>
17-1	cat	12	diarrhea	NI	non- DEC	+	TET-CEX	<i>bla</i> <sub>SHV</sub>	<i>irp2</i>
18	cat	12	diarrhea	NI	non- DEC	+	DOX-GM-AM- AMX-CEX	<i>bla</i> <sub>CTX-M</sub> , <i>aaC4</i>	<i>eaeA</i> , <i>irp2</i>
Y1-1	dog	16	diarrhea	NI	non- DEC	+	SXT-TET-DOX- AM-AMX-ENR- CRO-CEX	<i>bla</i> <sub>CTX-M</sub> , <i>oqxA</i> , <i>qnrS</i>	
Y35-1	dog	4	diarrhea	NI	non- DEC	+	SXT-TET-DOX- GM-AM-AMX- ENR-CRO-CEX	<i>bla</i> <sub>CTX-M</sub> , <i>aaC4</i> , <i>aac</i> (6')-Ib- <i>cr</i> , <i>oqxA</i> , <i>qnrA</i> , <i>qnrS</i>	<i>eaeA</i> , <i>irp2</i>
Y6-3	dog	6	diarrhea	NI	non- DEC	+	SXT-TET-DOX- AM-AMX	<i>qnrS</i>	<i>irp2</i>

Y58-1	cat	36	diarrhea	O142:K86	EPEC	+	SXT-TET-DOX-AM-AMX-CRO-CEX	<i>bla</i> <sub>CTX-M</sub> , <i>aaC4</i>	<i>irp2</i>
Y13-1	dog	44	diarrhea	NI	non-DEC	+			
Y45-1	cat	43	diarrhea	O128:K67	EPEC	+	SXT-TET-DOX-AM-AMX-ENR-CRO-CEX	<i>bla</i> <sub>CTX-M</sub>	<i>irp2</i>
Y28-1	cat	10	diarrhea	O8:K40	ETEC	+	SXT-TET-DOX-GM-AM-AMX-ENR-CEX	<i>oqxA</i>	<i>irp2</i>
Y70-3	dog	36	healthy	NI	non-DEC	+	TET-DOX-CEX	<i>aac(6')-Ib-cr</i> , <i>qnrB</i>	<i>irp2</i>
Y102-1	dog	36	healthy	NI	non-DEC	+	TET-DOX-AM-AMX-CEX	<i>bla</i> <sub>CTX-M</sub> , <i>aac(6')-Ib-cr</i> <i>bla</i> <sub>SHV</sub> ,	<i>irp2</i>
Y94-1	dog	48	healthy	NI	non-DEC	+	TET-GM-AM-AMX-CRO-CEX-FEP	<i>bla</i> <sub>CTX-M</sub> , <i>aac(6')-Ib-cr</i> , <i>oqxA</i> , <i>qnrB</i> , <i>qnrS</i>	<i>irp2</i>
Y85-2	dog	60	healthy	O9:K9	ETEC	+	TET-GM-AM-AMX-CEX	<i>bla</i> <sub>CTX-M</sub> , <i>aaC4</i>	<i>irp2</i>
Y90-1	dog	36	healthy	NI	non-DEC	+	AM-AMX	<i>bla</i> <sub>SHV</sub> , <i>oqxA</i>	<i>irp2</i> , <i>EAST1</i>
Y95-1	dog	120	healthy	NI	non-DEC	+	CEX		<i>EAST1</i>
Y99-1	dog	24	healthy	O25:K19	ETEC	+	TET-DOX	<i>bla</i> <sub>SHV</sub> , <i>bla</i> <sub>CTX-M</sub> , <i>oqxA</i>	<i>irp2</i>
Y105-2	dog	48	healthy	NI	non-DEC	+	SXT-TET-DOX-AM-AMX-ENR-CEX	<i>bla</i> <sub>CTX-M</sub> , <i>aaC4</i> , <i>aac(6')-Ib-cr</i> , <i>qnrS</i>	<i>irp2</i>
Y101-1	dog	48	healthy	NI	non-DEC	+			<i>irp2</i>
Y98-4	dog	12	healthy	O7:K1	ETEC	+	TET-DOX-GM-AM	<i>aaC4</i> , <i>qnrA</i> <i>bla</i> <sub>SHV</sub> ,	<i>irp2</i>
Y82-1	dog	6	healthy	NI	non-DEC	+		<i>bla</i> <sub>CTX-M</sub> , <i>aac(6')-Ib-cr</i> , <i>oqxA</i>	<i>irp2</i>

Y88-2	dog	24	healthy	O25:K19	ETEC	+	SXT-TET-DOX-AM-ENR	<i>bla</i> <sub>CTX-M</sub> , <i>aaC4</i> , <i>aac(6')-Ib-cr</i> , <i>qnrA</i> <i>bla</i> <sub>CTX-M</sub> ,	<i>eaeA</i> , <i>irp2</i>
Y64-2	dog	36	healthy	O29:K?	EIEC	+	TET-AM-CEX	<i>aaC4</i> , <i>aac(6')-Ib-cr</i> , <i>qnrA</i> <i>bla</i> <sub>CTX-M</sub> ,	<i>eaeA</i> , <i>irp2</i>
Y41-1	dog	48	healthy	NI	non-DEC	+	SXT-TET-DOX-GM-AM-AMX-ENR-CRO-CEX	<i>aaC4</i> , <i>aac(6')-Ib-cr</i> , <i>qnrA</i> <i>bla</i> <sub>CTX-M</sub> ,	<i>irp2</i>
Y54-1	cat	12	healthy	O78:K80	ETEC	+	SXT-TET-DOX-GM-AM-ENR-CEX	<i>aaC4</i> , <i>aac(6')-Ib-cr</i> , <i>oqxA</i> , <i>qnrS</i>	<i>eaeA</i> , <i>irp2</i> , <i>EAST1</i>
Y43-1	cat	10	diarrhea	NI		+	SXT-TET-DOX-AM-AMX-ENR-CRO-CEX	<i>oqxA</i> , <i>qnrS</i>	<i>irp2</i>
Y27-1	cat	10	diarrhea	O8:K40	ETEC	+	TET-DOX	<i>bla</i> <sub>SHV</sub>	
Y33-1	dog	48	healthy	NI		+	TET-DOX-CEX	<i>aac(6')-Ib-cr</i> , <i>oqxA</i>	<i>eaeA</i> , <i>irp2</i>
Y24-1	dog	3	healthy	O124:K72	EIEC	+	TET-DOX	<i>oqxA</i>	<i>eaeA</i> , <i>irp2</i>
Y81-2	dog	72	healthy	NI	non-DEC	-	SXT-TET-AM-AMX-ENR	<i>bla</i> <sub>SHV</sub> , <i>aac(6')-Ib-cr</i> , <i>oqxA</i> , <i>qnrS</i>	<i>irp2</i>
Y83-1	dog	36	healthy	NI	non-DEC	-	TET-DOX-AMX-CEX	<i>bla</i> <sub>SHV</sub> , <i>aac(6')-Ib-cr</i> , <i>qnrA</i> , <i>qnrB</i>	<i>irp2</i>
Y80-1	cat	60	healthy	NI	non-DEC	-	ENR	<i>bla</i> <sub>CTX-M</sub> , <i>aac(6')-Ib-cr</i>	<i>irp2</i> , <i>F17</i>
L91-1	cat	18	diarrhea	O6:K15	ETEC	-	DOX-GM-AMX	<i>bla</i> <sub>SHV</sub> , <i>bla</i> <sub>SHV</sub> , <i>bla</i> <sub>CTX-M</sub> ,	<i>irp2</i>
11-1	cat	6	diarrhea	O78:K80	ETEC	-	TET-AM-AMX	<i>aaC4</i> , <i>aac(6')-Ib-cr</i> , <i>oqxA</i>	<i>eaeA</i> , <i>irp2</i>
71-5	dog	2	diarrhea	NI	non-DEC	-		<i>bla</i> <sub>SHV</sub> , <i>aaC4</i> ,	<i>eaeA</i> , <i>irp2</i>

118-2	dog	24	diarrhea	O25:K19	ETEC	-	SXT-TET-DOX	<i>aac(6')-Ib-cr, oqxA</i> <i>bla<sub>SHV</sub>,</i> <i>aaC4,</i> <i>aac(6')-Ib-cr, qnrA</i>	<i>eaeA, irp2</i>
16-2	dog	11	diarrhea	NI	non-DEC	-	DOX		
20-1	cat	36	healthy	NI	non-DEC	-	DOX-CEX	<i>bla<sub>CTX-M</sub>,</i> <i>oxxA, qnrS</i>	<i>irp2</i>
15	dog	2	diarrhea	NI	non-DEC	-	DOX-GM-AM-AMX-CRO-CEX	<i>bla<sub>CTX-M</sub>,</i> <i>aac(6')-Ib-cr</i>	<i>eaeA, irp2</i>
10	cat	48	diarrhea	O114:K90	EPEC	-	SXT-TET-GM-AM-AMX-CRO-CEX	<i>bla<sub>SHV</sub>,</i> <i>bla<sub>CTX-M</sub>,</i> <i>aac(6')-Ib-cr, qnrB</i>	<i>eaeA</i>
6	cat	18	healthy	NI	non-DEC	-	SXT-TET-AM-AMX-ENR-CEX	<i>bla<sub>SHV</sub></i>	<i>irp2</i>
13	cat	30	healthy	NI	non-DEC	-	GM-AM-AMX-CRO-CEX	<i>bla<sub>SHV</sub>,</i> <i>bla<sub>CTX-M</sub></i>	<i>eaeA</i>
4	cat	42	healthy	NI	non-DEC	-	AM-AMX-CEX	<i>oxxA</i>	<i>eaeA</i>
Y3-1	dog	2	diarrhea	O6:K15	ETEC	-		<i>bla<sub>CTX-M</sub>,</i> <i>aaC4,</i> <i>aac(6')-Ib-cr</i>	<i>eaeA, irp2</i>
Y8-1	dog	12	diarrhea	NI	non-DEC	-	TET-ENR	<i>bla<sub>SHV</sub>,</i> <i>bla<sub>CTX-M</sub>,</i> <i>aac(6')-Ib-cr, qnrB</i> <i>bla<sub>CTX-M</sub>,</i> <i>aaC4,</i>	<i>irp2</i>
Y20-1	dog	48	diarrhea	NI	non-DEC	-	DOX-GM	<i>aac(6')-Ib-cr, oqxA,</i> <i>qnrS</i>	<i>irp2</i>
Y40-1	dog	96	diarrhea	O25:K19	ETEC	-	TET-GM-AM-AMX-CEX	<i>bla<sub>SHV</sub>,</i> <i>bla<sub>CTX-M</sub></i>	<i>eaeA, irp2</i>
Y17-1	dog	3	diarrhea	O6:K15	ETEC	-	SXT-TET-DOX-GM-AM-AMX-ENR-CEX	<i>bla<sub>CTX-M</sub>,</i> <i>aac(6')-Ib-cr, oqxA,</i> <i>qnrS</i>	<i>irp2</i>

Y31-1	cat	16	healthy	O6:K15	ETEC	-	SXT-TET-DOX-GM-AM-AMX-CEX	<i>bla<sub>SHV</sub>, bla<sub>CTX-M</sub>, oqxA</i>	<i>irp2</i>
Y12-1	cat	10	diarrhea	O78:K80	ETEC	-	TET	<i>bla<sub>CTX-M</sub></i>	<i>irp2</i>
Y18-1	cat	8	healthy	O78:K80	ETEC	-	AM-AMX	<i>bla<sub>CTX-M</sub></i>	<i>irp2</i>
Y5-2	dog	24	diarrhea	NI	non-DEC	-	TET-AMX		<i>irp2</i>
Y37-1	cat	36	healthy	O6:K15	ETEC	-	DOX	<i>bla<sub>CTX-M</sub>, aac(6')-Ib-cr, oqxA</i>	<i>eaeA, irp2</i>
Y14-1	cat	10	diarrhea	NI	non-DEC	-	TET-AM-AMX-ENR-CRO-FEP	<i>bla<sub>CTX-M</sub></i>	<i>irp2</i>
Y22-2	dog	168	diarrhea	NI	non-DEC	-	AMX		<i>eaeA, irp2</i>
Y9-1	cat	12	diarrhea	O8:K40	ETEC	-		<i>aac(6')-Ib-cr</i>	<i>eaeA, irp2</i>
Y16-1	cat	16	diarrhea	NI	non-DEC	-	SXT-TET-DOX-GM-AM-AMX-ENR-CRO-CEX	<i>bla<sub>SHV</sub>, bla<sub>CTX-M</sub>, oqxA</i>	<i>eaeA, EAST1, irp2</i>
Y65-2	dog	36	healthy	NI	non-DEC	-	TET-DOX-AM-AMX	<i>bla<sub>CTX-M</sub></i>	<i>irp2</i>
Y79-1	dog	24	healthy	O20:K17	ETEC	-	TET-AM-CEX	<i>bla<sub>CTX-M</sub>, aaC4, aac(6')-Ib-cr, oqxA</i>	<i>irp2</i>
Y120-1	dog	60	healthy	NI	non-DEC	-	SXT-TET-DOX-GM-AM-AMX-ENR-CEX	<i>bla<sub>SHV</sub>, bla<sub>CTX-M</sub>, oqxA, qnrS</i>	<i>irp2</i>
Y76-1	dog	24	healthy	NI	non-DEC	-	TET-DOX	<i>bla<sub>SHV</sub>, bla<sub>CTX-M</sub></i>	<i>irp2</i>
Y112-2	dog	96	healthy	O114:K90	EPEC	-	TET-DOX	<i>bla<sub>SHV</sub>, oqxA</i>	<i>irp2</i>
Y62-3	dog	6	healthy	O6:K15	ETEC	-	SXT-TET-DOX-GM-AM-AMX	<i>bla<sub>SHV</sub>, bla<sub>CTX-M</sub>, oqxA, qnrS</i>	<i>irp2</i>
Y74-3	dog	24	healthy	O125:K70	EPEC	-	SXT-TET-DOX-AM-AMX	<i>qnrS</i>	<i>irp2</i>
Y84-1	dog	48	healthy	O25:K19	ETEC	-	SXT-TET-DOX-GM-AM-CEX	<i>bla<sub>SHV</sub>, oqxA</i>	
Y114-1	dog	16	healthy	O125:K70	EPEC	-	SXT-TET-DOX-GM-AM-AMX-ENR-CRO-CEX	<i>bla<sub>SHV</sub>, bla<sub>CTX-M</sub>, aaC4, aac(6')-Ib-cr, qnrA</i>	<i>irp2</i>

Y73-3	dog	72	healthy	O8:K40	ETEC	-	CRO	<i>bla<sub>SHV</sub>,</i> <i>bla<sub>CTX-M</sub></i>	<i>irp2</i>
Y72-3	dog	12	healthy	NI	non-DEC	-	SXT-TET-DOX	<i>bla<sub>SHV</sub>,</i> <i>bla<sub>CTX-M</sub>,</i> <i>aac(6')-Ib-cr, oqxA</i>	<i>eaeA, irp2, F17</i>
Y71-3	dog	4	healthy	NI	non-DEC	-	SXT-TET-DOX-CEX	<i>aaC4,</i> <i>aac(6')-Ib-cr</i>	<i>irp2</i>
Y92-1	dog	36	healthy	O6:K15	ETEC	-			<i>irp2</i>
Y32-1	dog	168	diarrhea	O15:K?	ETEC	-	DOX	<i>bla<sub>SHV</sub>,</i> <i>bla<sub>CTX-M</sub>,</i> <i>oqxA</i>	<i>irp2</i>
Y15-1	dog	2	diarrhea	O6:K15	ETEC	-		<i>bla<sub>CTX-M</sub>,</i> <i>aaC4,</i> <i>aac(6')-Ib-cr</i>	<i>irp2</i>
Y23-1	dog	16	healthy	NI	non-DEC	-	TET-DOX	<i>bla<sub>CTX-M</sub>,</i> <i>aac(6')-Ib-cr, oqxA</i>	<i>eaeA, irp2</i>
Y60-1	dog	3	healthy	O8:K40	ETEC	-	DOX-CEX	<i>oqxA</i>	<i>eaeA, irp2</i>

<sup>1</sup> NI: no identification; +: ESBL producing isolates; -: non-ESBL producing isolates