

**Table S1.** The primers used for confirming *Salmonella* and *S. Pullorum*.

Target gene	Primer sequence (5'-3')	Product size (bp)	Annealing temperature (°C)	Reference
<i>IpaJ</i>	F TACCTGTCTGCTGCCGTGA	740	58	[10]
	R ACCCTGCAAACCTGAAATC			
<i>FimW</i>	F AACAGTCACTTTGAGCATGGGTT	477	50	[38]
	R GAGTGACTTTGTCTGCTCTTCA			

**Table S2.** The primer sequences of antimicrobial resistance gene.

Target gene	Primer sequence (5'-3')	Annealing temperature (°C)	Reference
<i>bla<sub>TEM</sub></i>	F ATAAAATTCTTGAAGACGAAA	57	[43]
	R GACAGTTACCAATGCTTAATC		
<i>bla<sub>SHV</sub></i>	F TTATCTCCCTGTTAGCCACC	57	[43]
	R GATTGCTGATTTCGCTCGG		
<i>bla<sub>CTX-M</sub></i>	F CGCTTTGCGATGTGCAG	54	[44]
	R ACCGCGATATCGTTGGT		
<i>bla<sub>VIM</sub></i>	F GATGGTGTTTGGTCGCATA	55	[44]
	R CGAATGCGCAGCACCAG		
<i>bla<sub>NDM</sub></i>	F GGTGTTGGCGATCTGGTTTTTC	52	[44]
	R CGGAATGGCTCATCACGATC		
<i>bla<sub>IMP</sub></i>	F GGAATAGAGTGGCTTAAYTCTC	60	[44]
	R GGTTTAAYAAAACAACCACC		
<i>bla<sub>MIR</sub></i>	F TCG GTAAAGCCGATGTTGCGG	64	[45]
	R CTT CCACTGCGGCTGCCAGTT		
<i>bla<sub>DHA</sub></i>	F AACTTTCACAGGTGTGCTGGGT	64	[45]
	R AACTTTCACAGGTGTGCTGGGT		
<i>qnrC</i>	F GGTGTACATTTATTGAATC	50	[46]
	R TCCACTTTACGAGGTTCT		
<i>oqxA</i>	F GATCAGTCAGTGGGATAGTTT	55	[47]
	R TACTCGGCGTTAACTGATTA		

<i>AAC2</i>	F ACTGTGATGGGATACGCGTC R CTCCGTCAGCGTTTCAGCTA	58	[48]
<i>AAC4</i>	F CTTCAGGATGGCAAGTTGGT R TCATCTCGTTCTCCGCTCAT	58	[48]
<i>tetA</i>	F GCGCCTTTCCTTTGGGTTCT R CCACCCGTTCCACGTTGTTA	62	[48]
<i>tetB</i>	F CATTAATAGGCGCATCGCTG R TGAAGGTCATCGATAGCAGG	57	[48]
<i>tetC</i>	F TTGCGGGATATCGTCCATTC R CATGCCAACCCGTTCCATGT	62	[48]
<i>sul1</i>	F CTTCGATGAGAGCCGGCGGC R GCAAGGCGGAAACCCGCGCC	58	[49]
<i>sul2</i>	F GCGCTCAAGGCAGATGGCATT R GCGTTTGATAACCGGCACCCGT	50	[49]
<i>Mcr-1</i>	F CGGTCAGTCCGTTTGTTC R CTTGGTCGGTCTGTAGGG	55	[28]
<i>Mcr-2</i>	F TGTTGCTTGTGCCGATTGGA R AGATGGTATTGTTGGTTGCTG	65	[28]
<i>Mcr-3</i>	F TTGGCACTGTATTTTGCATTT R TTAACGAAATTGGCTGGAACA	50	[28]
<i>Mcr-4</i>	F ATTGGGATAGTCGCCTTTTT R TTACAGCCAGAATCATTATCA	56	[50]

**Table S3.** The PCR conditions and size of PCR products among 21 antimicrobial resistance genes.

Target gene	Procedures							Amplicon size(bp)	Reference
	Pre-denaturation	Denaturation	Annealing	Elongation	Cycles	Elongation			
<i>bla</i> <sub>TEM</sub>	94°C 5min	94°C 60s	57°C 60s	72°C 1min	35	72°C 10min	643	[43]	
<i>bla</i> <sub>SHV</sub>	94°C 5min	94°C 30s	57°C 30s	72°C 1min	30	72°C 10min	860	[43]	
<i>bla</i> <sub>CTX-M</sub>	94°C 5min	94°C 30s	54°C 30s	72°C 1min	32	72°C 10min	550	[44]	
<i>bla</i> <sub>VIM</sub>	94°C 10min	94°C 30s	55°C 40s	72°C 45s	30	72°C 10min	390	[44]	
<i>bla</i> <sub>NDM</sub>	94°C 10min	94°C 30s	52°C 40s	72°C 50S	36	72°C 5min	621	[44]	
<i>bla</i> <sub>IMP</sub>	94°C 10min	94°C 30s	60°C 40s	72°C 50S	36	72°C 5min	232	[44]	
<i>bla</i> <sub>MIR</sub>	94°C 3min	94°C 30s	64°C 30s	72°C 60S	25	72°C 7min	302	[45]	

<i>bla<sub>DBHA</sub></i>	94°C 3min	94°C 30s	64°C 30s	72°C 60S	25	72°C 7min	405	[45]
<i>qnrC</i>	94°C 5min	94°C 30s	50°C 30s	72°C 1min	32	72°C 10min	666	[46]
<i>oqxA</i>	94°C 5min	94°C 30s	55°C 30s	72°C 1min	32	72°C 10min	670	[47]
<i>AAC2</i>	95°C 5min	94°C 30s	58°C 30s	72°C 1min	32	72°C 10min	482	[48]
<i>AAC4</i>	95°C 5min	94°C 30s	58°C 30s	72°C 1min	32	72°C 10min	286	[48]
<i>tetA</i>	95°C 5min	94°C 30s	50°C 30s	72°C 45s	30	72°C 10min	937	[48]
<i>tetB</i>	95°C 5min	94°C 30s	50°C 30s	72°C 45s	30	72°C 10min	416	[48]
<i>tetC</i>	95°C 10min	95°C 30s	55°C 60s	72°C 60s	30	72°C 7min	510	[48]
<i>sul1</i>	95°C 5min	94°C 30s	58°C 30s	72°C 45s	28	72°C 10min	238	[49]
<i>sul2</i>	95°C 5min	94°C 30s	50°C 30s	72°C 45s	32	72°C 10min	793	[49]
<i>Mcr-1</i>	94°C 4min	94°C 30s	55°C 60s	72°C 60s	30	72°C 10min	309	[28]
<i>Mcr-2</i>	95°C 3min	95°C 30s	55°C 30s	72°C 60s	30	72°C 10min	567	[28]
<i>Mcr-3</i>	94°C 4min	94°C 30s	50°C 60s	72°C 60s	30	72°C 10min	542	[28]
<i>Mcr-4</i>	94°C 4min	94°C 30s	56°C 60s	72°C 60s	32	72°C 10min	487	[50]

**Table S4:** The characteristics of 94 *Salmonella* isolates.

Isolate	Location	Farm	breed	Sreotype	ESBL phenotype	Resistance profiles	Resistance genes
20TA01	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR-AMP	<i>bla<sub>TEM</sub></i> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20TA02	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla<sub>TEM</sub></i> , <i>tetA</i> , <i>sul1</i>
20TA03	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla<sub>TEM</sub></i> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20TA04	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR-AMP	<i>bla<sub>TEM</sub></i> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20TA05	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla<sub>TEM</sub></i> , <i>sul1</i>
20TA06	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla<sub>TEM</sub></i> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>

20TA07	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i>
20TA08	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20TA09	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i>
20TA10	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>tetC</i> , <i>sul1</i>
20TA11	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- GM-STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>AAC2</i> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20TA12	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>sul1</i>
20TA13	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i>
20TA14	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20TA15	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i>
20TA16	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20TA17	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-STR- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i>
20TA18	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	AMX- AMP-FOX	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>

20TA19	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20TA20	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20TA21	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20TA22	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20TA23	Tai'an	Farm A	White feather broiler	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20JN01	Jining	Farm B	Bairi	S. Pullorum	-	STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i>
20JN02	Jining	Farm B	Bairi	S. Pullorum	-		<i>bla</i> <sub>TEM</sub>
20JN03	Jining	Farm B	Bairi	S. Pullorum	-	AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i>
20JN04	Jining	Farm B	Bairi	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetB</i> , <i>sul1</i>
20JN05	Jining	Farm B	Bairi	S. Pullorum	-	AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetB</i>
20JN06	Jining	Farm B	Bairi	S. Pullorum	-	STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i>
20JN07	Jining	Farm B	Bairi	S. Pullorum	-	AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i>
20JN08	Jining	Farm B	Bairi	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i>
20JN09	Jining	Farm B	Bairi	S. Pullorum	-	AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20JN10	Jining	Farm B	Bairi	S. Pullorum	-	STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>

20JN11	Jining	Farm B	Bairi	S. Pullorum	-	STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>bla</i> <sub>CTX-M</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20JN12	Jining	Farm B	Bairi	S. Pullorum	-	AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20JN13	Jining	Farm B	Bairi	S. Pullorum	-		<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20JN14	Jining	Farm B	Bairi	S. Enteritidis	-	TET-DOX- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20JN15	Jining	Farm B	Bairi	S. Pullorum	-	TET-DOX- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20SD01	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD02	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD03	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD04	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD05	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD06	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD07	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR-	<i>bla</i> <sub>TEM</sub>

20SD08	Rizhao	Farm C	Langya	S. Thompson	-	AMX- AMP SXT-TET- DOX-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD09	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD10	Rizhao	Farm C	Langya	S. Thompson	-	SXT-TET- DOX-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD11	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR-AMX	<i>bla</i> <sub>TEM</sub>
20SD12	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i>
20SD13	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetB</i>
20SD14	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR-AMX	<i>bla</i> <sub>TEM</sub>
20SD15	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>sul2</i>
20SD16	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD17	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD18	Rizhao	Farm C	Langya	S. Thompson	-	GM-STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD19	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR-	<i>bla</i> <sub>TEM</sub>

20SD20	Rizhao	Farm C	Langya	S. Thompson	-	AMX- AMP SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD21	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD22	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD23	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD24	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetB</i>
20SD25	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD26	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i>
20SD27	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD28	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD29	Rizhao	Farm C	Langya	S. Thompson	-	SXT-GM- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20SD30	Rizhao	Farm C	Langya	S. Thompson	-	SXT- AMX- AMP	<i>bla</i> <sub>TEM</sub>



20SD31	Rizhao	Farm C	Langya	S. Thompson	-	STR- AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i>
20SD32	Rizhao	Farm C	Langya	S. Thompson	-	STR- AMX- AMP	<i>bla</i> <sub>TEM</sub>
20LH06	Jining	Farm D	Luhua	S. Pullorum	+	STR-CAZ	<i>bla</i> <sub>TEM</sub> , <i>tetB</i>
20LH07	Jining	Farm D	Luhua	S. Pullorum	+	STR-CAZ	<i>bla</i> <sub>TEM</sub>
20LH08	Jining	Farm D	Luhua	S. Pullorum	-	STR-CAZ	<i>bla</i> <sub>TEM</sub> , <i>tetB</i>
20LH09	Jining	Farm D	Luhua	S. Pullorum	-	STR-CAZ	<i>bla</i> <sub>TEM</sub>
20LH10	Jining	Farm D	Luhua	S. Pullorum	-	STR-CAZ	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i>
20LH11	Jining	Farm D	Luhua	S. Pullorum	+	STR-CAZ	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i>
20LH12	Jining	Farm D	Luhua	S. Pullorum	+	TET-STR- AMX- AMP- CAZ	<i>bla</i> <sub>TEM</sub> , <i>tetB</i>
20LH13	Jining	Farm D	Luhua	S. Pullorum	-	STR-CAZ	<i>bla</i> <sub>TEM</sub>
20LH14	Jining	Farm D	Luhua	S. Pullorum	-	TET-STR	<i>bla</i> <sub>TEM</sub> , <i>tetA</i>
20LH15	Jining	Farm D	Luhua	S. Pullorum	-	STR-FOX- CAZ	<i>bla</i> <sub>TEM</sub>
20LH16	Jining	Farm D	Luhua	S. Pullorum	+	STR- AMX- AMP- CAZ	<i>bla</i> <sub>TEM</sub> , <i>tetB</i>
20LH17	Jining	Farm D	Luhua	S. Pullorum	+	STR-CAZ	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i> , <i>sul2</i>
20LH18	Jining	Farm D	Luhua	S. Pullorum	-	STR- AMX- AMP- CAZ	<i>bla</i> <sub>TEM</sub> , <i>tetB</i>
20LH19	Jining	Farm D	Luhua	S. Pullorum	-	AMX- AMP	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i> , <i>sul1</i>
20LH20	Jining	Farm D	Luhua	S. Pullorum	-	STR-CAZ	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i>

20LH21	Jining	Farm D	Luhua	S. Pullorum	-	STR-CAZ	<i>bla</i> <sub>TEM</sub>
20LH22	Jining	Farm D	Luhua	S. Pullorum	+	STR-CAZ	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i>
20LH23	Jining	Farm D	Luhua	S. Pullorum	-	STR-CAZ	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i>
20LH24	Jining	Farm D	Luhua	S. Pullorum	-	STR- AMX- AMP-FOX STR-CAZ	<i>bla</i> <sub>TEM</sub> , <i>tetA</i> , <i>tetB</i>
20LH25	Jining	Farm D	Luhua	S. Pullorum	-	STR-CAZ	<i>bla</i> <sub>TEM</sub>
20LH26	Jining	Farm D	Luhua	S. Pullorum	+	CAZ	<i>bla</i> <sub>TEM</sub>
20LH27	Jining	Farm D	Luhua	S. Pullorum	-	TET-STR- CAZ	<i>bla</i> <sub>TEM</sub>
20LH28	Jining	Farm D	Luhua	S. Pullorum	-	STR	<i>bla</i> <sub>TEM</sub>
20LH29	Jining	Farm D	Luhua	S. Pullorum	-	STR	<i>bla</i> <sub>TEM</sub>

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