

Figure S1. expression and purification of LptA and LptC. (A) Gene sequence and optimization of GC. (B) Analysis of LptA-induced expression using SDS-PAGE assay. M: Marker; 1: Total cell protein without IPTG induction; 2, 4: Cellular lysate supernatant at 20°C with IPTG induction; 3, 5: Inclusion body at 20°C; 6: Cellular lysate supernatant at 30°C; 7: Inclusion body at 30°C. (C) Analysis of LptC-induced expression using SDS-PAGE assay. M: Marker; 1: Total cell protein without IPTG induction; 2: Cellular lysate supernatant at 20°C with IPTG induction; 3: Inclusion body at 20°C with IPTG induction; 4: Cellular lysate supernatant at 30°C with IPTG induction; 5: Inclusion body at 30°C with IPTG induction; (D) and (E) Analysis of purified LptA and LptC protein using SDS-PAGE assay. (F) and (G) Western-blot Analysis of purified LptA and LptC protein with anti-His antibody.

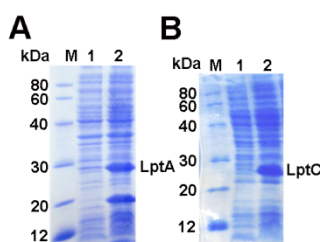


Figure S2. Analysis of the overexpression of LptA and LptC. The *pET-16a-lptA* and *pET-16a-lptC* were constructed and transferred into *E. coli* BL21(DE3) cells to express full length His-tagged LptA and LptC. The expression of the fusion proteins was induced by adding 0.5 mM IPTG into the cell culture and grown overnight at 30°C. Total proteins in whole cell lysates were analyzed by 12% SDS-PAGE and coomassie blue staining. (A) LptA-induced expression. (B) LptC-induced expression. M: Marker; 1: Total cell protein without IPTG induction; 2: Total cell protein with IPTG induction

Table S1 Plasmids used in this paper

name	Description	Reference
<i>pAD-lptA</i>	Expression vector for LptA -AD-HA	Xuelian Zhang,et al.,2019
<i>pBD-lptC</i>	Expression vector for LptC-DNA-BD-Myc	Xuelian Zhang,et al.,2019
<i>pAD-t</i>	Expression vector for T-AD-Myc	Xuelian Zhang,et al.,2019
<i>pBD-53</i>	Expression vector for 53-DNA-BD-Myc	Xuelian Zhang,et al.,2019
<i>pET-28a-lptA</i>	Expression vector for LptA-His ₆ (28-185)	In this study
<i>pET-28a-lptC</i>	Expression vector for LptC-His ₆ (24-191)	In this study
<i>pET-16a-lptA</i>	Expression vector for LptA-His ₆	Xuelian Zhang,et al.,2019
<i>pET-16a-lptC</i>	Expression vector for LptC-His ₆	Xuelian Zhang,et al.,2019

Table S2 Antibiotic sensitivity of clinically resistant strains

Antibiotics	MIC (μg/mL)			
	<i>E.coli</i> ^a	<i>E.coli</i> ^b	<i>E.coli</i> ^c	<i>E.coli</i> ^d
Polymyxin B	<0.5	≤1	>1	>1
Amikacin	>64	>64	>64	-
Gentamicin	>64	>64	>8	-
Ceftazidime	>16	>16	>16	-
Meropenem	≤1	>8	8	-
Cefotaxime	>32	>16	2	-
Levofloxacin	>8	>8	4	-
Cyclopropane	>2	>2	1	-
Ampicillin	>16	>32	≤2	-
ceftriaxone	R	R	R	-
Source	blood	sputum	urine	feces

E.coli^{a-d} are four strains used in Table S2. a-c are isolates from clinical patients and d is isolate with *mcr-1* gene from goat feces in the farm.