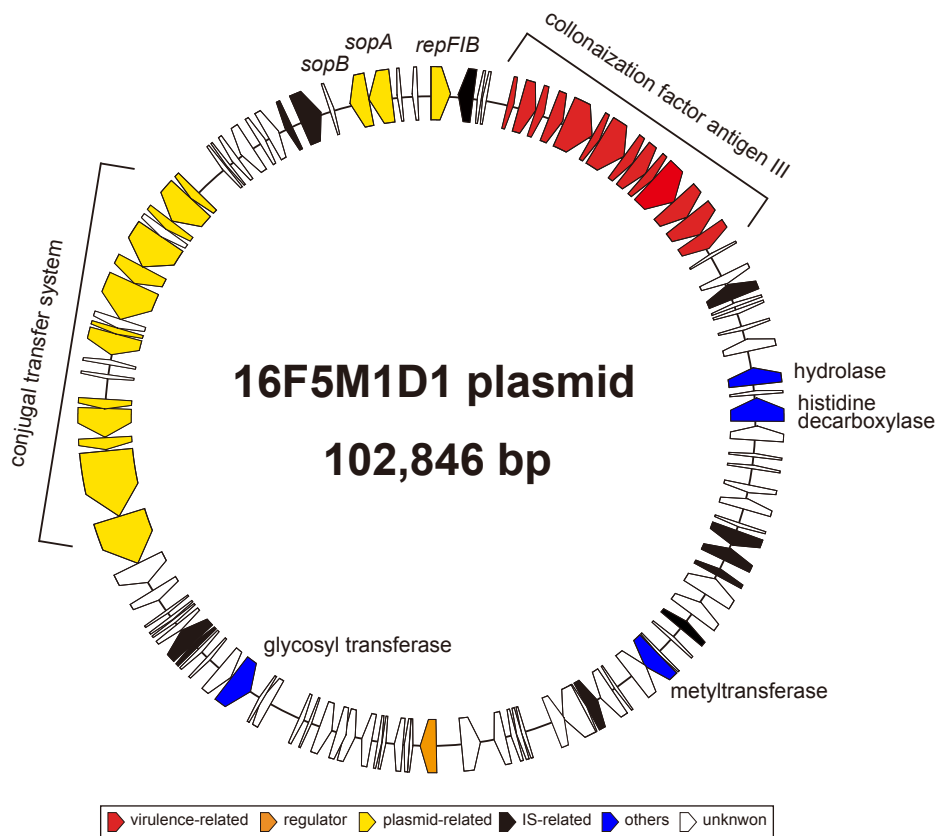


Supplementary Figure 1. Circular map of the *E. coli* 16F5M1D1 (O8:H8) chromosome.

The outermost to innermost circles are as follows: 1st, nucleotide sequence positions; 2nd and 3rd, CDSs transcribed clockwise and counterclockwise, respectively; 4th, CDSs conserved in *E. coli* K-12 ($\geq 80\%$ identity and $\geq 60\%$ coverage); 5th, locations of prophages (PPs) and integrative elements (IEs) (red: LT PPs, orange: other PPs, brown: IEs); 6th, rRNA; 7th, tRNA; 8th, GC content; and 9th, GC skew.



Supplementary Figure 2. Genetic structures the CFAllI-encoding plasmid.

Supplementary Table1. General genomic features of *E. coli* O8H8 strain 16F5M1D1

Chromosome	
Length (bp)	4,800,098
CDSs	4438
rRNA operons	22
tRNAs	91
Prophages	5
Integrative elements	2
Plasmid 1	
Length (bp)	102,846
CDSs	111
Plasmid 2	
Length (bp)	3,717
CDSs	5
Plasmid 3	
Length (bp)	2,732
CDSs	3
Total genome size (bp)	4,909,393

Supplementary Table 2. Reference strains of *E. coli* and *Escherichia* cryptic clade 1 used in this study

Strain	pathotype	Phylogroup	O serogroup	H serogroup	Accession no.
PCN033	ExPEC	D	O11	UT	NZ_CP006632
<i>Escherichia coli</i> 042	EAEC	D	O44	H18	NC_017626
UMN026	ExPEC	D	O17	H18	NC_011751
IAI39	ExPEC	F	O7	H45	NC_011750
SMS-3-5	Non-pathogenic	F	O19	H34	NC_010498
2009C-3133	STEC	F	O119	H4	NZ_CP013025
E2348/69	EPEC	B2	O127	H6	NC_011601
SE15	Non-pathogenic	B2	O150	H5	NC_013654
Nissle1917	Non-pathogenic	B2	O6	H1	CP007799
upec-29	UPEC	B2	O6	H31	NZ_JSIG01000007
LF82	AIEC	B2	O83	H1	CU651637
ED1a	Non-pathogenic	B2	O81	H27	NC_011745
APEC O1	APEC	B2	O1	H7	CP000468
RM13514	STEC	D	O145	H28	CP006027
Sakai	STEC	E	O157	H7	NC_002695
CB9615	EPEC	E	O55	H7	NC_013941
F6326-C1	ETEC	E	O169	H41	NZ_CP024263
CFSAN004179	STEC	A	O136	H16	CP013662
CFSAN051542	Non-pathogenic	UT	O18ac	H14	NZ_CP020835
F5505-C1	ETEC	A	O25	H16	NZ_CP020835
TW10598	ETEC	A	O6	H16	NZ_CM007915
H10407	ETEC	A	O78	H11	NC_017633
MG1655	Non-pathogenic	A	O16	H48	NC_000913
UMNF18	ETEC	A	O147	H4	NZ_CP002890
UMNK88	ETEC	A	O149	H10	NC_017641
PCN061	ExPEC	A	O9	H4	NZ_CP006636
H1827/12	ExPEC	A	O7	H4	NZ_CP013031
APECO78	APEC	C	O78	H9	NC_020163
SEC470	ETEC	C	O4	H11	NZ_CP007594
16-9255	STEC	B1	O121	H19	CP022407
13E0780	STEC	B1	O156	H25	NZ_CP020106
ATCC9637	Non-pathogenic	B1	O6	H49	CP002185
E24377A	ETEC	B1	O139	H28	CP000800
90-9281	ETEC	B1	O128	H27	NZ_CP024243
SE11	Non-pathogenic	B1	O152	H28	AP009240
HUSEC2011	STEC	B1	O104	H4	NZ_HF572917
IAI1	Non-pathogenic	B1	O8	H19	NC_011741
09-00049	STEC	B1	O168	H8	NZ_CP015228
RM7190	STEC	B1	O91	H21	NZ_CP015244
CFSAN029787	EIEC	B1	O96	H19	CP011416
F5176C6	ETEC	B1	O167	H5	NZ_CP024667
12009	STEC	B1	O103	H2	AP010958
11128	STEC	B1	O111	H8	AP010960
11368	STEC	B1	O26	H11	NC_013361
13E0767	EPEC	B1	O156	H8	NZ_CP020107
TW15838	Non-pathogenic	clade1	Gp9	H45	AEJX00000000

UT: untypeable