

Supplementary Material

The Supplementary Materials include 1 supplementary table and 5 supplementary figures as follows.

Supplementary Table S1: Specificity test for *stn* LAMP assays.

Supplementary Figure S1: The nucleotide sequence of *stn* gene and primers used for LAMP assay, arrows indicate the position and direction of DNA synthesis.

Supplementary Figure S2: Phylogenetic tree derived from the entire *stn* sequence of members of various genera of the family *Enterobacteriaceae* determined by the Neighbor-Joining method. Numbers within the dendrogram indicate the occurrence (%) of branching in the 2000 bootstrapped tree. Branches corresponding to partitions reproduced in less than 50% of bootstrap replicates are collapsed.

Supplementary Figure S3: Electrophoresis analysis of *stn* LAMP amplified products without loop primer (3A) and with loop primers (3B) using different reaction times. Lane M: 100 bp DNA ladder as size markers, lanes 1-12: LAMP carried out for 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55 and 60 min, respectively; and lane 13: negative control (absence of DNA template).

Supplementary Figure S4: Specificity test for the *stn* LAMP assay. Lane M: 100 bp DNA ladder as size marker, lane 1: *S. Anatum*; lane 2: *S. Amsterdam*; lane 3: *S. Bangkok*; lane 4: *S. Choleraesuis*; lane 5: *S. Derby*; lane 6: *S. Enteritidis*, lane 7: *S. Paratyphi*, lane 8: *Citrobacter freundii*, lane 9: *Escherichia coli* K12, lane 10: *Enterococcus faecalis*, lane 11 *Enterobacter tarda*, lane 12: *Proteus vulgaris*, lane 13: *S. Typhimurium* ATCC 23566 as positive control, 14: negative control (no DNA template).

Supplementary Figure S5: Sensitivity of *stn* LAMP assays using purified DNA (A) and DNA from boiled cells (B). (A) Amount of purified DNA needed for detection of *stn* LAMP products. Lane M: 100 bp DNA ladder as size marker; lanes 1-6, reaction carried out using 5

fold-serial dilutions of standard genomic DNA at 3125 fg, 625 fg, 125 fg, 25 fg, 5 fg and 1 fg DNA/reaction, respectively; lane 7, negative control (no DNA template). (B) The number of *Salmonella* cells required for detection of *stn* by LAMP. Lane M: 100 bp DNA ladder as size marker; lanes 1-4, reaction carried out using DNA prepared directly from boil cells of 10^3 , 10^2 , 10 and 1 cells/reaction, respectively; lane 5, negative control (no DNA template).

SUPPLEMENTARY TABLE S1: Specificity test for *stn* LAMP assays.

Microorganisms	No. of strains	LAMP
<i>Salmonella enterica</i> subsp. <i>enterica</i>		
Serovar (I) Aberdeen	1	+
Abony	1	+
Agona	1	+
Ajana	1	+
Alachua	1	+
Altona	1	+
Amsterdam	1	+
Anatum	3	+
Augustenborg	1	+
Bangkok	1	+
Bareilly	1	+
Berta	1	+
Blockley	1	+
Bovismorbificans	1	+
Braenderup	1	+
Brunei	1	+
Cerro	1	+
Chester	1	+
Choleraesuis	1	+
Circhow	1	+
Corvallis	1	+
Cubana	1	+
Derby	1	+
Dublin	1	+
Emek	1	+
Enteritidis	2	+
Falkensee	1	+
Farmsen	1	+
Gallinarum	1	+
Gera	1	+
Give	1	+
Hadar	1	+
Havana	1	+
Heidelberg	1	+
Hvittingfoss	1	+
Infantis	1	+
Isangi	1	+

SUPPLEMENTARY TABLE S1: Specificity test for *stn* LAMP assays (continued).

Microorganisms	No. of strains	LAMP
<i>Salmonella enterica</i> subsp. <i>enterica</i>		
Serovar (I) Javiana	1	+
Kedougou	1	+
Kentucky	1	+
Krefeld	3	+
Langensalza	1	+
Lexington	1	+
Liverpool	1	+
Livingstone	1	+
London	1	+
Manhattan	1	+
Mbandaka	3	+
Molade	1	+
Montevideo	1	+
Muenchen	1	+
Newport	1	+
Ohio	1	+
Orion	2	+
Oslo	1	+
Panama	1	+
Paratyphi A	1	+
Paratyphi B	2	+
Poona	1	+
Potsdam	1	+
Rissen	1	+
Rubislaw	1	+
Saintpaul	1	+
Sandiego	1	+
Schwarzengrund	1	+
Senftenberg	1	+
Singapore	1	+
Stanley	1	+
Tennessee	1	+
Thompson	1	+
Typhi	1	+
Typhimurium	3	+
Urbana	1	+
Virchow	2	+
Wandswarth	1	+

SUPPLEMENTARY TABLE S1: Specificity test for *stn* LAMP assays (continued).

Microorganisms	No. of strains	LAMP
<i>Salmonella enterica</i> subsp. <i>enterica</i>		
Serovar (I) Waycross	1	+
Welikade	1	+
Weltevreden	2	+
Westhampton	1	+
Wilmington	1	+
Worthington	1	+
Yerba	1	+
Zanzibar	1	+
<i>Salmonella enterica</i> subsp. <i>salamae</i> (II)	3	+
<i>Salmonella enterica</i> subsp. <i>arizonae</i> (IIIa)	1	+
<i>Salmonella enterica</i> subsp. <i>diarizonae</i> (IIIb)	1	+
<i>Salmonella enterica</i> subsp. <i>houtenae</i> (IV)	1	+
<i>Citrobacter diversus</i>	3	-
<i>Citrobacter freundii</i>	3	-
<i>Enterobacter tarda</i>	1	-
<i>Enterobacter aerogenes</i>	1	-
<i>Enterobacter cloacae</i>	3	-
<i>Enterococcus faecalis</i>	1	-
<i>Escherichia coli</i>	17	-
<i>Klebsiella ozaenae</i>	1	-
<i>Klebsiella pneumoniae</i>	10	-
<i>Morganella morganii</i>	1	-
<i>Proteus mirabilis</i>	1	-
<i>Proteus rettegeri</i>	1	-
<i>Proteus vulgaris</i>	1	-
<i>Serratia macescens</i>	1	-
<i>Shigella boydii</i>	1	-
<i>Shigella flexneri</i>	6	-
<i>Shigella sonnei</i>	4	-

Note: + = Positive amplification

- = Negative amplification

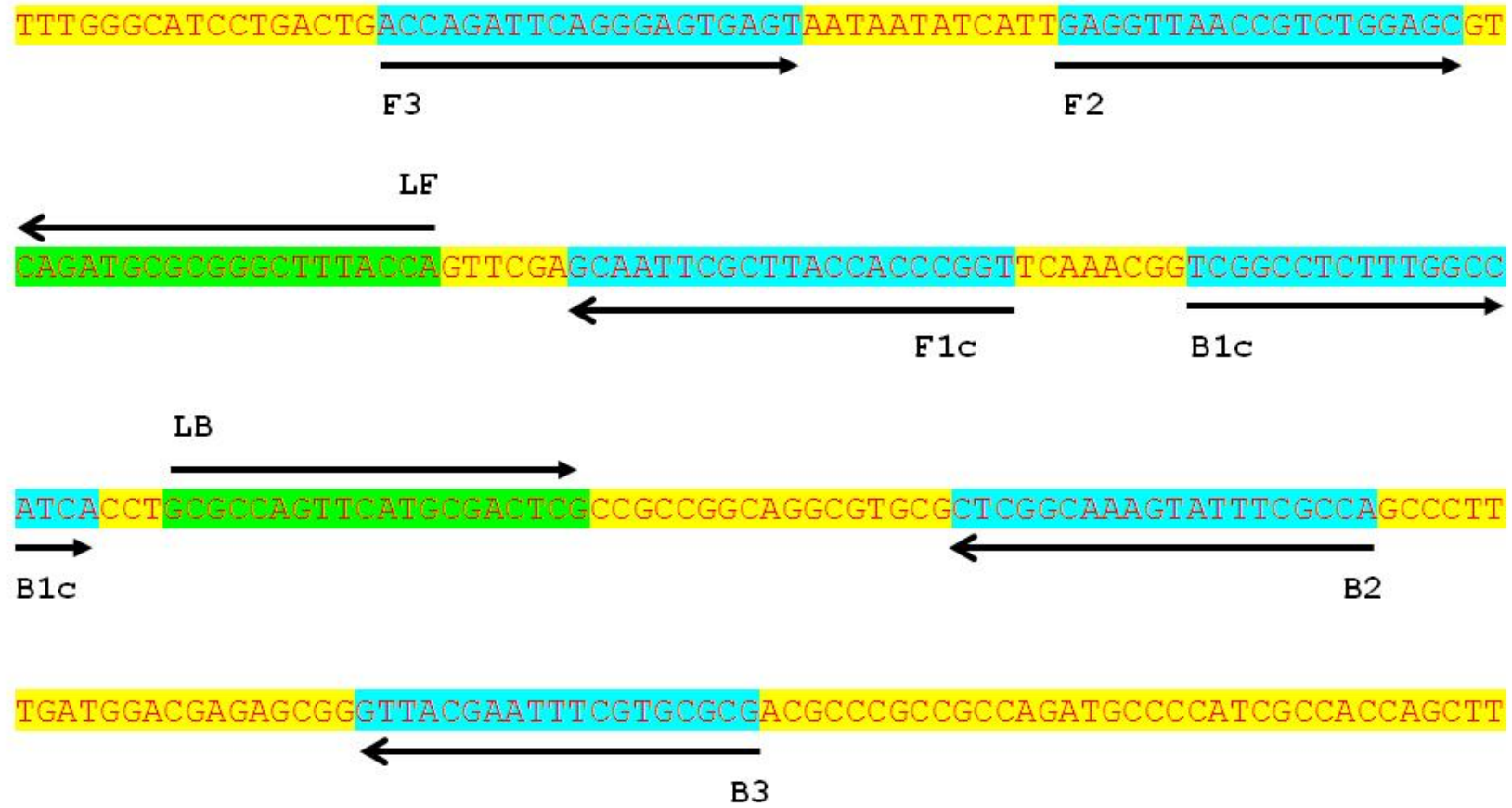


FIGURE S1

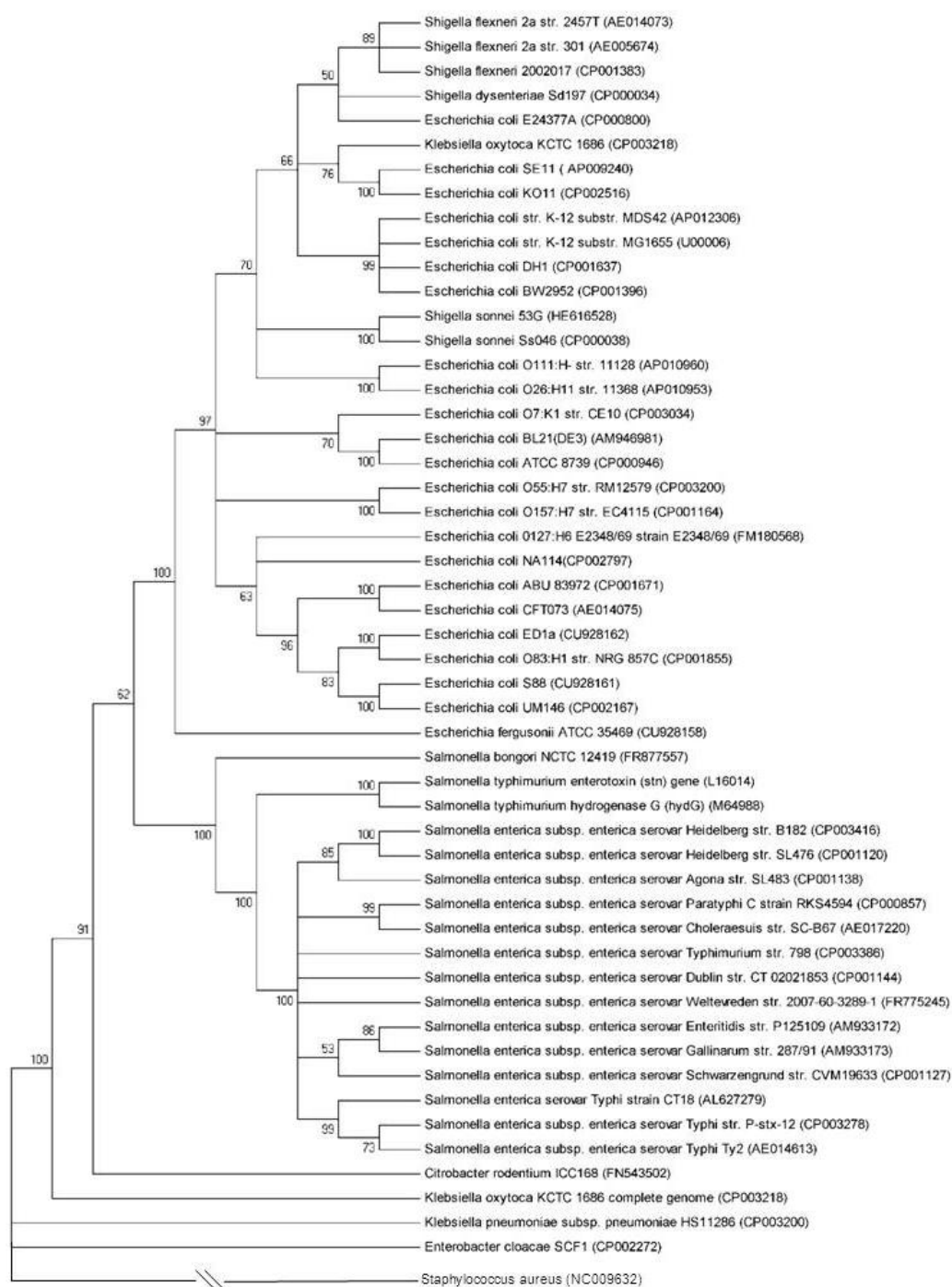
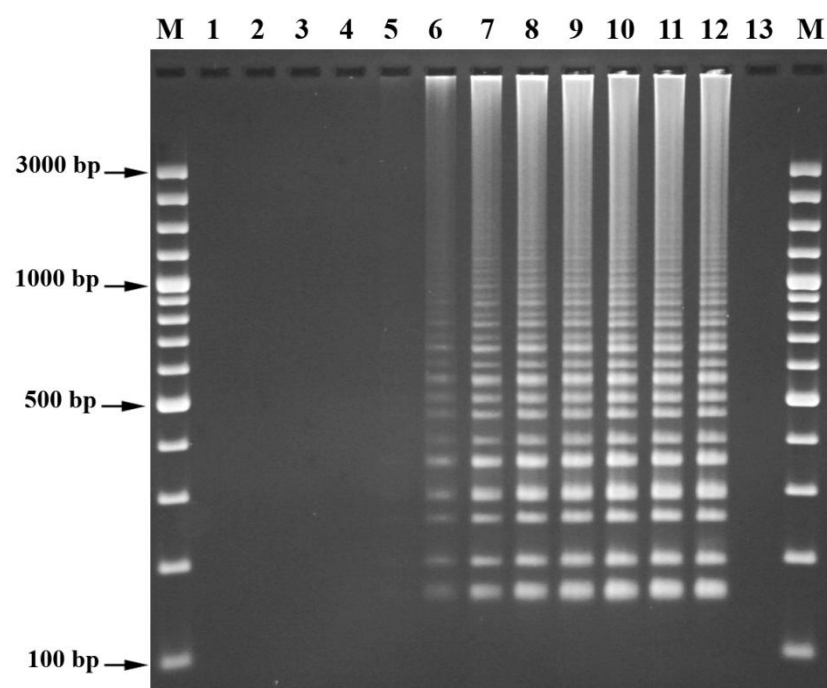


FIGURE S2

(A)



(B)

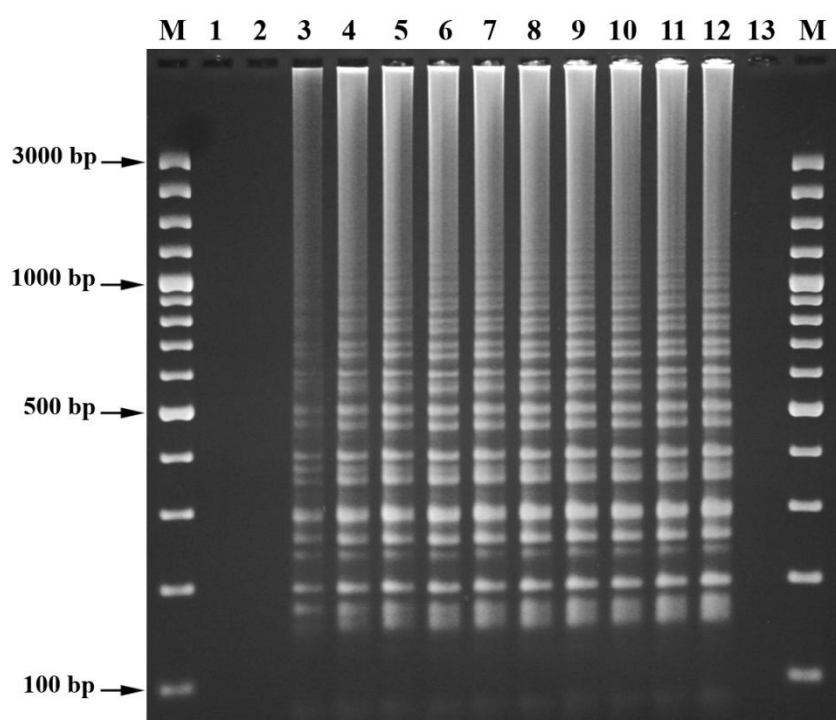


FIGURE S3

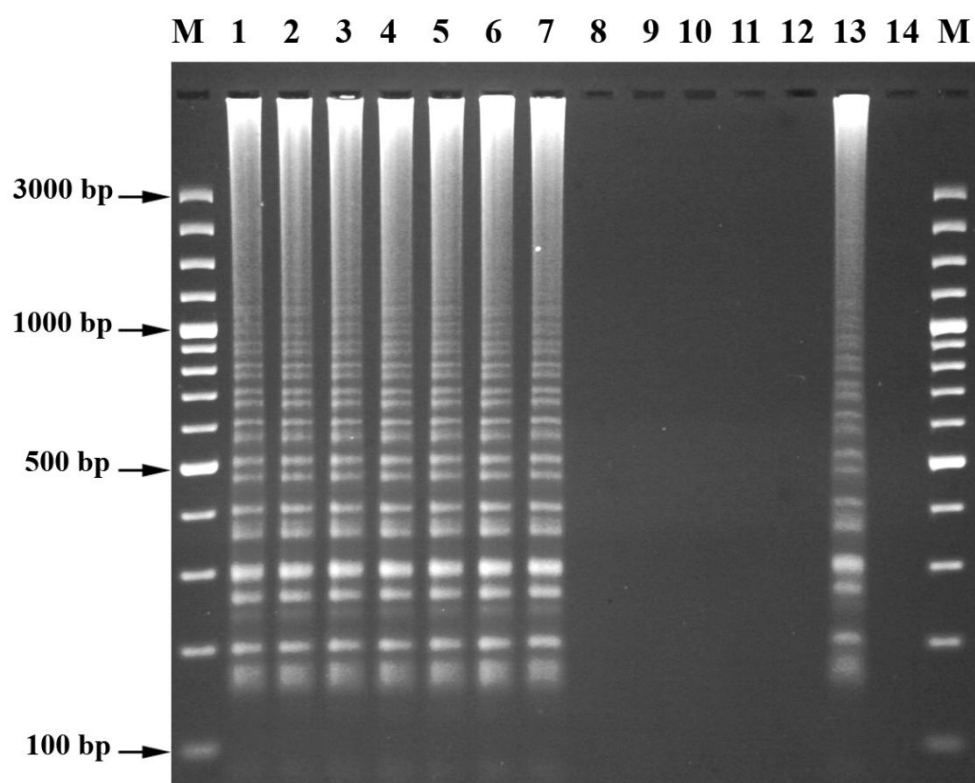
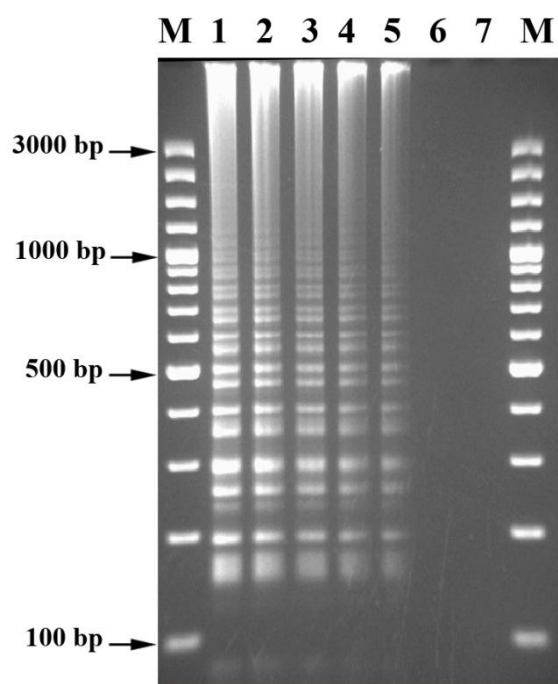


FIGURE S4

(A)



(B)

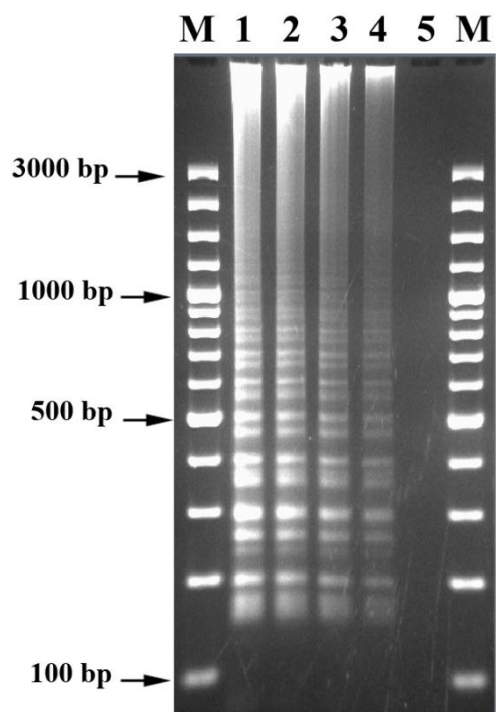


FIGURE S5