# Primers specific for the fimbrial major subunit gene stdA can be used to detect Salmonella enterica serovars

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摘要

**Abstract**

The feasibility of using two primers internal to the stdA gene (which encodes the fimbrial major subunit of the std fimbrial gene cluster in Salmonella enterica serovar Typhi) to detect Salmonella by PCR was explored. The 518-bp stdA specific sequence was conserved among 268 strains from 45 serovars of S. enterica. One Salmonella bongori CCUG 30042 strain and 34 non-Salmonella strains did not possess this sequence. A sensitivity test revealed that the stdA-specific primer set detected 3.4 x 10(-1) pg of genomic DNA and 3.0 x 10(5) CFU/ml with serial dilutions of Salmonella Typhimurium cells. In vitro testing for specificity using pig carcass sponge samples contaminated with Salmonella Typhimurium also was performed. An initial Salmonella Typhimurium inoculum of 4.4 x 10(1) CFU/ml in pig carcass exudates reached the stdA primer detection level after preenrichment in buffered peptone water at 37 degrees C for 18 h in the presence of indigenous non-Salmonella flora at 4.0 X 10(7) CFU/ml, but the detection level decreased to 4.4 x 10(0) CFU/ml after selective enrichment in Rappaport-Vassiliadis R10 broth for 18 h at 42 degrees C. The PCR method with primers specific for stdA is a quick and sensitive tool for detecting S. enterica, which is an important cause of foodborne disease.