

PCR-based Typhoid Diagnostic Assay and Kit

A cost effective PCR based diagnostic assay and kit for detection of typhoid fever caused by Salmonella typhi with high sensitivity and specificity

Background

Typhoid fever is endemic in many developing and under-developed countries and is caused by the bacterium *Salmonella typhi*. Typhoid fever is diagnosed by using a combination of the clinical presentation which includes the isolation of *Salmonella typhi* from body fluids and by Widal test. The most prevalent method of diagnosing typhoid fever is a positive blood culture, but the test is positive in only 40-60% of cases. There is a lack of reliable, rapid and sensitive methods for detection of *Salmonella typhi*.

The present technology provides a PCR based assay for detection of *Salmonella typhi* with higher sensitivity and specificity.

Technology

Researchers from a University of repute in India have developed a PCR based diagnostic assay for typhoid fever using a *Salmonella typhi* specific signature sequence as the biomarker. Novel primers corresponding to the identified 350 bp signature sequence have been synthesized and found to provide a *Salmonella typhi* specific diagnosis of enteric fever with high sensitivity. The diagnostic assay is expected to be cost effective compared to presently available PCR based assays.

Potential Applications

Diagnosis of typhoid fever caused by *Salmonella typhi*

Value Proposition

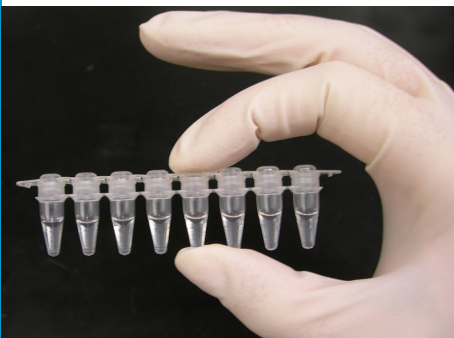
- PCR based assay highly specific for detection of typhoid fever and gastroenteritis caused by *S. typhi*
- Novel set of PCR primer sequences with patent applied for
- Assay with high sensitivity and specificity as compared to routine methods based on blood culture and other serological tests
- Cost effective compared to existing PCR based assays

Technology Status

Assay has been tested in human clinical samples

Intellectual Property status

Patent Pending



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