CRISPOL
Salmonella enterica ser. Typhimurium CRISPR genotyping (ref. BMX-SE-BP/BM72)

« CRISPOL » (genotyping of *Salmonella enterica* CRISPR locus) is a new surveillance technique for food-borne diseases caused by *Salmonella enterica serovar typhimurium* (one of the main serovars responsible of infections), which was invented at the Institut Pasteur by Dr. FX Weill (French patent (no. FR07/09188) international (no. PCT/IB2008/004004). This technique is directly inspired by the *Mycobacterium tuberculosis* "spoligotyping" technique with specific Salmonella CRISPR probes discovered at Institut Pasteur, Paris. The technique consist in a 72-Plex assay on Luminex® microbead-based systems, including detection of 68 spacers and 4 SNPs variants on some spacers.

Advantages

- Fast results (5-6h), Cost-effective
- High throughput (96 wells plates)
- Internal Controls provided (DT104)
- NEW, may one day replace Serotyping
- Existence of standardized nomenclature of clusters
- Training by our experts

Applications

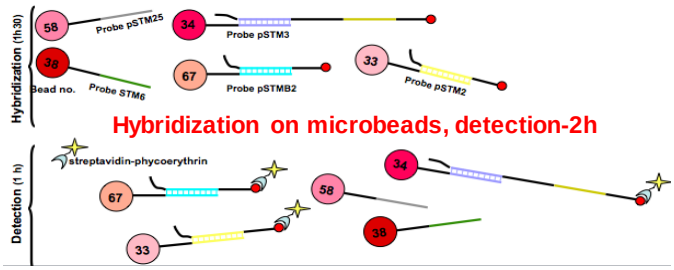
- Surveillance of *Salmonella enterica* ser. Typhimurium potential outbreaks
- Studies on the genetic diversity of bacterial populations.
- Molecular Epidemiology of Food-borne diseases caused by *Salmonella enterica* ser. typhimurium

Kit Composition

- Positive controls (DNA from DT104, …)
- Primer couple to amplify *S. enterica*, serovar typhimurium CRISPR locus
- Luminex® Microbeads oligonucleotide-coupled and mixed, including 72 different targets either polystyrene xMAP® beads(ref. BMX-SE-BP72) or magnetic MagPlex® (ref. BMX-SE-BM72). Total quantity of microbeads necessary as per request for 100, 250 and 500 assays (depending on your reading device; less beads needed on the MagPix®)
- Streptavidine-Phycoérythrine

DNA Extraction
(from a *Salmonella enterica* culture)

Amplification by PCR of the 2 CRISPR loci-3h



Hybridization on microbeads, detection-2h

Reading on Luminex® 200 or BioPlex®-1h

Computerized display and results management