Novel Platform Technologies for Molecular Diagnostics

MultiGEN™

A modification to Gold Standard Sanger Sequencing.
This novel modification allows simultaneous sequencing of multiple amplicons.

Features:

- Gold Standard accuracy – the accepted industry benchmark.
- Verifiable results format – nucleotide sequences.
- Multiplexed – panels for common clinical symptoms.
- High throughput – rapid TAT.
- Cost-effective – low cost per reported result.

Applications

Infectious diseases, pharmacogenomics, oncology, veterinary medicine, food, environmental and confirmatory testing.

IC-Code™

A true internal control that eliminates false negatives, while providing confirmation of positive results.

Features:

- The analyte and internal control have the same PCR and sequencing annealing sites.
- Identical processing conditions for the internal control and analyte significantly reduce false negatives.
- The use of MultiGEN™ based Sanger sequencing prevents false positives.
- Allows sensitivity to be set at the desired limit of detection (LOD).

Applications

Blood donor screening for viral and bacterial pathogens, infectious disease syndromes (e.g. bacterial and viral meningitis, septicemia), testing for viral contamination in biopharmaceutical manufacturing.

Oncoplex to Tumorplex™

Allele-specific multiplex sequencing platform. The 3' prime end of the sequencing primer carries the SNP of interest, ensuring that the generated nucleotide sequence will have the expected downstream sequence.

Features:

- The generated nucleotide sequence confirms the SNP and/or the mutation of interest, at the correct locus.
- Highest sensitivity Mutant:Wild >1: 100,000.
- Wild type as internal control without suppression.
- No need to enrich cancer tissue = cost savings.
- Small sample volume (e.g. fine needle aspiration biopsies).

Clinical application

Detection of cancer markers: Braf V600E, Q209L0, (thyroid, melanoma, colorectal), Kras G12S, G12V, G12A, G12C, G12D, G13D (colorectal), PIK3CA (colorectal), EGFR (T790M, L858M, G719C (lung cancer).

PrimaCap™

Simultaneous detection of multiple mutations in short fragments, < 100 mer, at very low concentrations. Typical applications include detecting mutations within liquid biopsies.

Features:

- Detection of cell free DNA/RNA from liquid biopsies (plasma, urine, Thin Prep etc).
- DNA/RNA fragments smaller than 100mer.
- Limit of detection (LOD) less than 10 copies/ml.
- DNA sequencing-based identification.
- Increased sensitivity with FFPE samples

Applications

Monitoring for malignancy
Detection of Braf (V600E, Q209L0), Kras (G12S, G12V, G12A, G12C, G12D, G13D), PIK3CA, EGFR (T790M, L858M, G719C), mi RNA, and Methylation

MULTIGEN DIAGNOSTICS

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