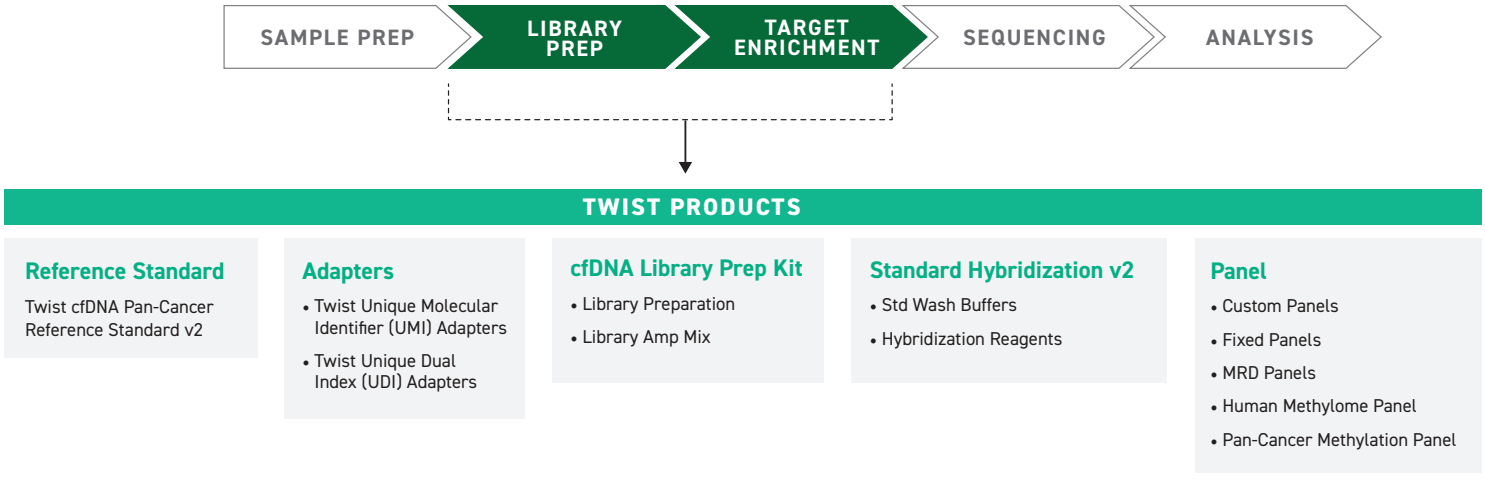
Liquid Biopsy Research Advancements: A Path to Cancer Detection

Partnering with researchers for improved outcomes.

Liquid biopsies offer a non-invasive method to detect and monitor tumors. Efforts are underway to develop liquid biopsy assays for early cancer detection, minimal residual disease testing (MRD), tumor profiling, and more. Despite significant promise, challenges persist in effectively identifying circulating tumor-derived DNA fragments (ctDNA) in the complex landscape of cell-free DNA (cfDNA) that pervades liquid biopsy samples. To address this, Twist Bioscience offers a suite of cutting-edge research solutions, each designed to help researchers improve ctDNA detection and the research of clinically relevant variants for developing NGS-based assays.

Liquid Biopsy Research Solutions

The research tools in this workflow are optimized to improve liquid biopsy research as well as validated to enhance the full workflow when used together.



TWIST BIOSCIENCE RESEARCH SOLUTIONS FOR EARLY CANCER DETECTION AND MONITORING

Minimal Residual Disease (MRD) Research Solutions

TWIST cfDNA LIBRARY PREPARATION KIT: The kit's high conversion rates, even with low inputs, enables the detection, with high sensitivity, to detect even very rare variants down to 0.1% VAF, critical in the early diagnosis of cancer.

TWIST cfDNA PAN-CANCER REFERENCE STANDARD V2: Provides researchers with synthetic reference materials crucial for defining assay parameters such as Limit of Detection (LoD) and Limit of Blank (LoB). This comprehensive set includes wild-type and mutant alleles, facilitating accurate assay calibration.

MINIMAL RESIDUAL DISEASE (MRD) TOOLS: Twist offers custom targeted enrichment solutions and the MRD Rapid 500 Panel. Leveraging proprietary design algorithms, this panel enables rapid turnaround time and comprehensive genomic characterization.

Twist also offers an MRD solution with an API integration, delivering personalized panels up to 10,000 probes, flexible QC, and an automation-friendly matrix tube option. Get the customization you need with rapid turnaround times for your personalized testing needs.

TWIST UMI ADAPTER SYSTEM: Enhances variant detection sensitivity from cfDNA, crucial for identifying low-frequency somatic variants. By reducing PCR errors, this system enables accurate detection of ctDNA in liquid biopsy samples.

Early Cancer Research Detection

NGS METHYLATION DETECTION SYSTEM: A highly sensitive solution for analyzing methylation patterns in cfDNA. This system, complemented by custom Methylation Panels, offers unparalleled precision and sensitivity in methylation sequencing, with applications in research for early cancer detection.

TWIST HUMAN METHYLOME PANEL: Enriches a significant portion of the human genome, providing broad coverage for methylation sequencing. Paired with the NGS Methylation Detection System, it delivers precise and uniform methylation data crucial for research in early cancer detection.

TWIST CUSTOM PANELS: Leverages precise oligonucleotide synthesis to build high-performing probe panels for next-generation sequencing (NGS) target enrichment.

THESE PANELS, CHARACTERIZED BY HIGH UNIFORMITY AND ON-TARGET RATES, FACILITATE PRECISE AND EFFICIENT SEQUENCING.

From minimal residual disease to early cancer detection, Twist is here to support researchers by providing the tools they need to tap into the power of liquid biopsy research. With proven performance and trusted technology, we are here to enable your path to improved outcomes.

Get in touch with us to explore the future of MRD research and liquid biopsy solutions. Contact your local representative for more information.

Learn more at twistbioscience.com/ngs or contact sales@twistbioscience.com

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