TWIST ONCOLOGY DNA CGP PANEL – 2.4 mb

Comprehensive analysis for tumor research

Comprehensive Genomic Profiling (CGP)

CGP is an assay that utilizes next-generation sequencing (NGS) to assess multiple established biomarkers present within a solid tumor. CGP detects at a genomic resolution that allows for the identification of variant classes such as Single Nucleotide Variants (SNV), indels, Copy Number Variants (CNV), fusions, splice variants, as well as cancer genomic signatures such as Tumor Mutational Burden (TMB) and Microsatellite Instability (MSI).

The breadth of this single assay allows for a robust understanding of a tumor profile, alleviating the need to use multiple tumor-specific panels or different modalities of testing. The panel is also compatible with Twist's enzymatic fragmentation library preparation and target enrichment reagents. Twist's CGP panel can also be supplemented with custom targets to include additional biomarkers.

PANEL CONTENT:

- 562 genes for Single Nucleotide Variants (SNV) and Hotspot coverage
- 57 genes for Copy Number Variant (CNV) Analysis
- 50 genomic loci for microsatellite instability scoring
- Inclusion of selected gene fusions
- Enables tumor mutational burden (TMB) analysis

PANEL TARGET SIZE	2.4 Mb
MEAN TARGET COVERAGE	515x
ON-TARGET RATE	77%
FOLD-80 BASE PENALTY	1.32
DUPLICATION RATE	20%
TARGET BASES COVERED >100X	99.5%

Table 1. Example Sequencing Metrics. Relevant sequencing QC metrics averaged across data downsampled to 2000x raw coverage (32M 2x150 reads).

HIGHLIGHTS

Comprehensive updated biomarkers in a single assay

- Includes 562 genes that incorporate all major tumor types.
- Can enable detection of SNV, CNV, TMB, MSI and select fusions.

Based in clinical research

- Enables research with recently updated biomarkers from tumor testing guidelines.
- CGP is increasingly adopted for the utilization of post-therapy guidance biomarker analysis.

Customizable for your needs and sample population

- The breadth of coverage for key biomarkers.
- Customer-centric content customization capabilities with integrated desired analysis solutions.
- Sequencer Agnostic Workflows

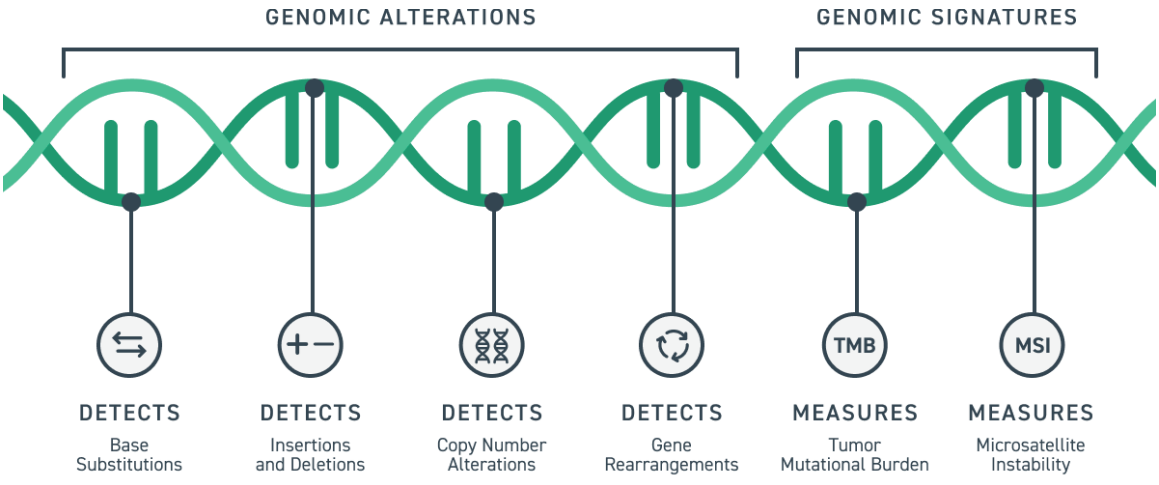

Figure 1. Comprehensive Genomic Profiling enables the detection of genomic alterations such as SNPs, Indels, and CNVs while also capturing genomic signatures which are important to understanding tumor biology such as TMB and MSI.

For Research Use Only. Not for use in diagnostic procedures.

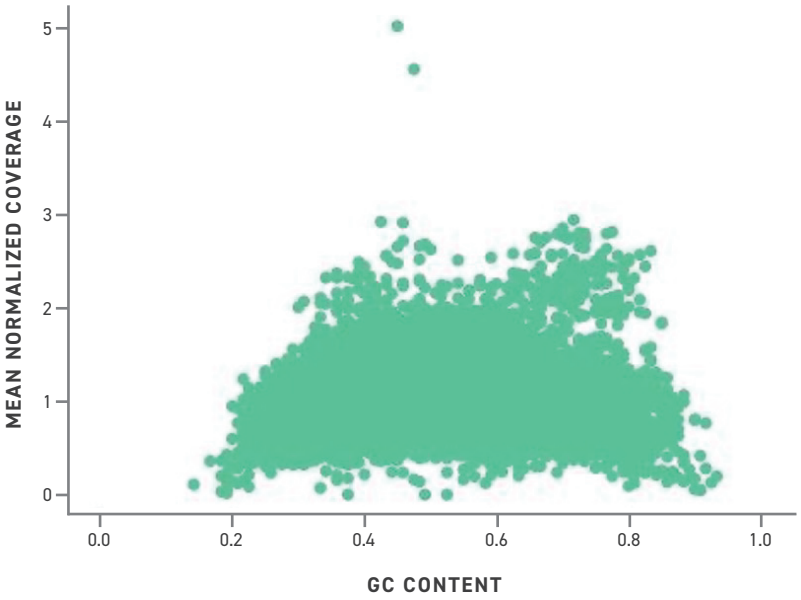

Figure 2. Uniform coverage of CGP targets with Twist Chemistry and Probe design. Panel sequencing with a complete Twist workflow exhibits uniform coverage and read distribution across %CG profiles

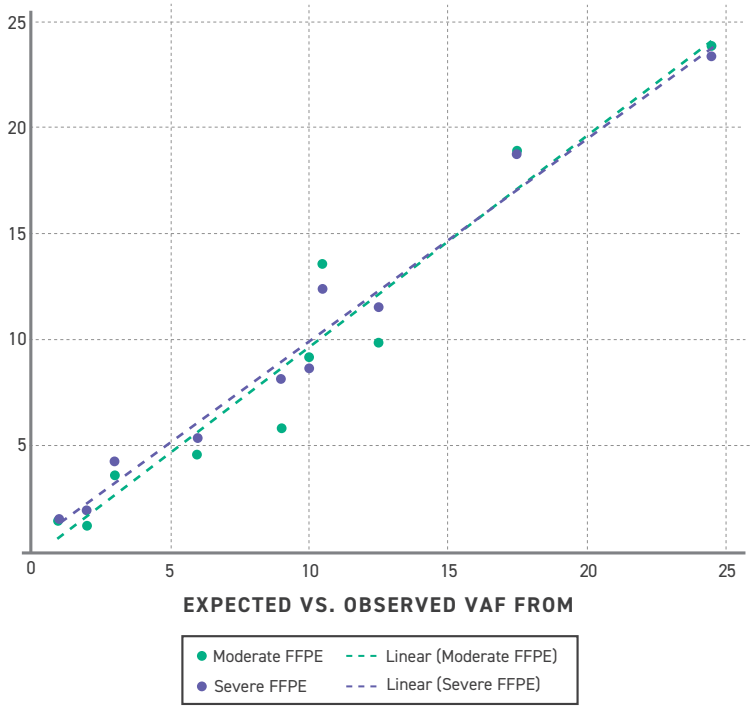

Figure 3. Variant calling concordance with a leading partner analysis solution using commercial FFPE control material. Correlation between observed and expected VAF of variants present in three common commercially available cancer reference controls. Enrichment of control samples containing 11 different SNV and Indels with the Twist Oncology DNA CGP panel. Samples were run in triplicate in material that represented degraded formalin-fixed DNA based on the fragmentation profiles. Data points shown represent the average of 3 replicates with a linear regression and Pearson's correlation of R2=0.945 for "moderately" degraded and R2=0.975 for severely degraded DNA. "Moderately" compromised FFPE is defined by the manufacturer as an average fragment length of between 2,000 to 4,000 bases and DNA integrity Number (DIN) in the range of 2.9 to 3.5. "Severely" compromised FFPE is defined by the manufacturer as an average fragment length >2,000 bases and a DIN in the range of 1.5 to 1.9.

LEARN MORE

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ORDERING INFORMATION

Twist Oncology – DNA CGP Panel – 2.4 Mb

116352: Oncology - DNA CGP Panel, 2.4 Mb, 2 Reactions
116353: Oncology - DNA CGP Panel, 2.4 Mb, 12 Reactions
116359: Oncology - DNA CGP Panel, 2.4 Mb, 96 Reactions