PILLAR BIOSCIENCES

Pillar® ONCO/Reveal™ Lung and Colon Cancer Panel

The ONCO/Reveal Lung and Colon Cancer Panel is a robust NGS assay that interrogates 22 genes of interest* across lung and colon cancer samples. The panel uses proprietary Stem-Loop Inhibition-Mediated amplification (SLIMamp®) technology, a tiled amplicon-based library preparation chemistry for efficient single-tube target enrichment.

ONCO/Reveal Lung and Colon Cancer Panel (22 genes)

AKT1	EGFR	FGFR2	NOTCH1	STK11
ALK	ERBB2	FGFR3	NRAS	TP53
BRAF	ERBB4	KRAS	PIK3CA	
CTNNB1	FBXW7	MAP2K1	PTEN	
DDR2	FGFR1	MET	SMAD4	

Simple NGS library prep workflow

Maintain control of samples and results with single-tube, tiled amplification that can be performed in-house by any NGS lab

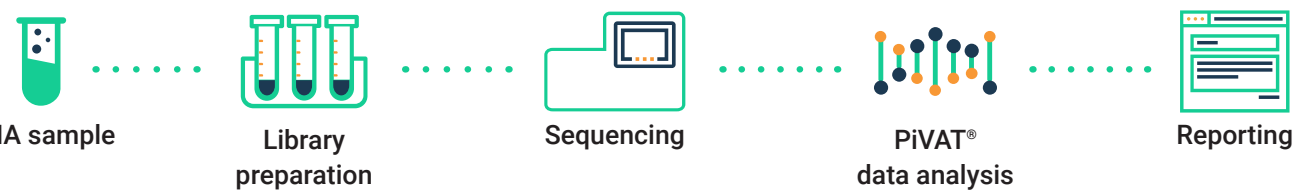
Sensitive and robust chemistry

Achieve variant detection as low as 1% VAF† without UIDs‡ even with limited DNA input or poor sample quality

Reduced fully-loaded lab costs

Improve lab efficiency with quicker turnaround time and reduced “no calls”, repeat testing, and difficult interpretation decisions

Simple, one-day workflow

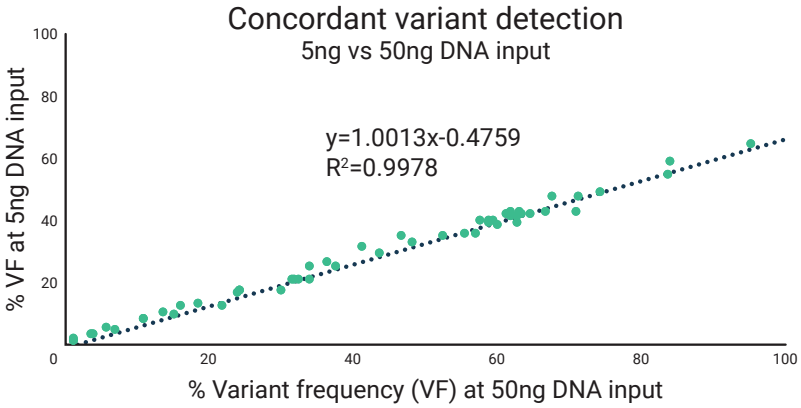


Gene-specific PCR & cleanup · Indexing PCR & cleanup · Quantitation & normalization · Load sequencer

*Content is based on data from ongoing clinical trials along with sources that include the College of American Pathologists (CAP), the Associations for Molecular Pathology (AMP), the National Comprehensive Cancer Network (NCCN), and the Catalog of Somatic Mutations in Cancer (COSMIC) database.
†VAF, variant allele frequency; ‡UID, unique ID; also known as unique molecular ID (UMI)

Panel specifications

Enrichment chemistry	Multiplex PCR using tiled amplicons
Number of pools	**1 pool**
Number of genes/amplicons	22/103
Number of targets	>1,800 hotspots, 11kb total size
Variant types	SNVs, indels
Average amplicon size	147bp
Recommended DNA inputW range	2.5ng to 80ng
Sample types	DNA from tissue or blood; FFPE
Mapping rate	97.4% ± 2.5%
% on-target aligned reads	96.8% ± 1.3%
Coverage uniformity (% targets with >0.2X mean coverage)	99.8% ± 0.7%
Total assay time (from DNA to sequencer)	<8 hours
Sequencing platforms	Illumina®; assays are coming soon for MGISEQ™ and Ion Torrent™ platforms



Sensitive variant detection

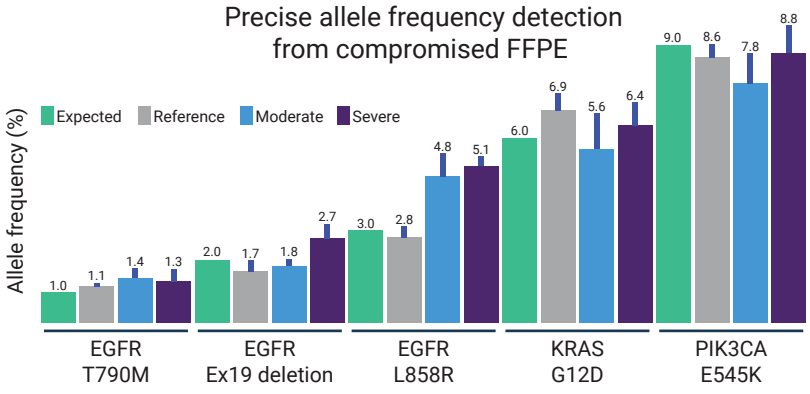
The ONCO/Reveal Lung and Colon Cancer Panel is highly precise even with low DNA inputs, demonstrating high concordance (R^2 >99%) between input amounts across a wide range of variant allele frequencies.

In the figure to the left, variant frequencies were detected by the ONCO/Reveal Lung and Colon Cancer Panel in 15 patient samples (6 NSCLC & 9 colon cancer) diluted to 5ng & 50ng. Assays and analyses were performed at Dartmouth Hitchcock Medical Center and presented at AMP 2016.

Robust variant detection

The ONCO/Reveal Lung and Colon Cancer Panel is accurate, precise, repeatable and sensitive to near the limit of detection regardless of FFPE quality.

In the figure to the right, formalin-compromised reference standards (Horizon Discovery) were evaluated using the ONCO/Reveal Lung and Colon Cancer Panel, which demonstrated accurate results from degraded samples.
N=10; error bars=standard deviation



Order or learn more at
pillar-biosciences.com

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