PRODUCT SHEET

ONCOReveal Lung cfDNA Panel

A cell-free DNA enrichment panel for NGS targeting 17 genes

- **Single well amplification from 5-50 ng of input cell-free DNA**
- **Variant detection down to 0.1%-0.2% frequency using Unique Identifiers (UIDs)**
- **81 target amplicons**
- **SNV and indel detection**
- **11 kb of genomic coverage**
- **9-10 hour protocol with multiple stopping points**

The ONCOReveal Lung cfDNA Panel from Pillar Biosciences is a comprehensive solution for NGS target enrichment for lung cell-free DNA samples, sometimes called liquid biopsy.

The ONCOReveal Lung cfDNA Panel offers outstanding mapping and on-target rates through Pillar's Unique Identifier (UID) and PiVAT™ bioinformatics technology.

Actionable target design

The target selection of the ONCOReveal Lung cfDNA Panel is based on recent guidelines from many professional societies such as the College of American Pathologists (CAP) and verified from databases such as The Cancer Genome Atlas (TCGA).

The ONCOReveal Lung cfDNA Panel targets 81 known regions of interest and both Single Nucleotide Variants (SNVs) and insertion-deletion mutations (Indels). With an average amplicon size is 147 bp, the entire panel has a total target size of 8 kb.

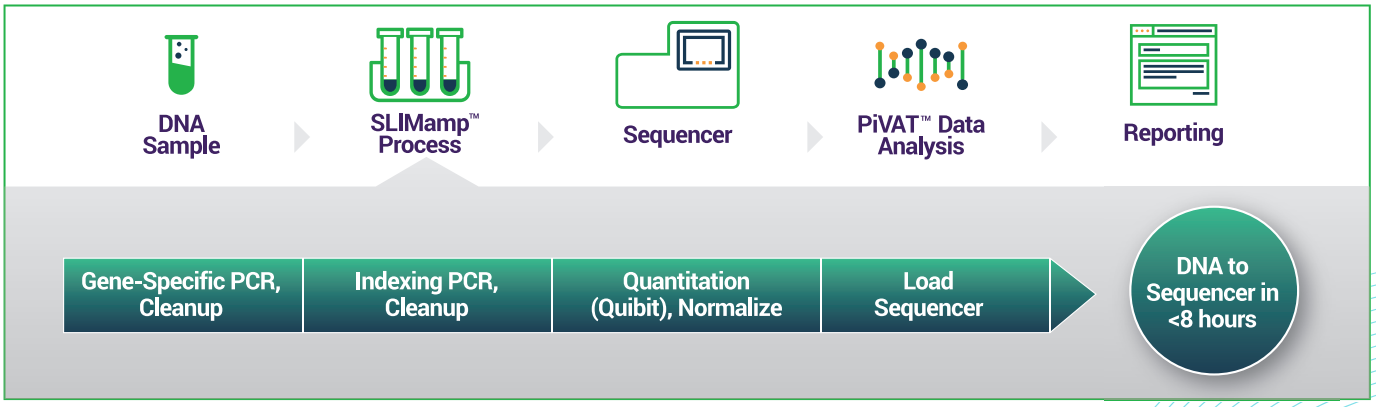
Lung cfDNA Panel 17-Gene List

AKT1	ALK	BRAF	DDR2
EGFR	ERBB2	ERBB4	FGFR1
FGFR3	KRAS	MAP2K1	MET
NRAS	PIK3CA	PTEN	STK11
TP53			

Panel Specifications

Number of genes	17
Target region	81 regions of interest, 8 kb total size
Variant type	SNV, Indels
Ave. amplicon size	147 bp average
Total amplicons	81
Input range	5-50 ng 30 ng recommended
Number of pools	1
Sample types	Cell-free DNA

Streamlined Workflow



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ONCOReveal Lung cfDNA Panel

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Enhance Target Specificity and Sequencing Confidence

Minimal hands-on, maximum results

Pillar Biosciences' streamlined laboratory workflow enables cell-free DNA to sequencer-ready library within 9-10 hours, with minimal sample handling.

The protocol has multiple stopping points for added flexibility.

Highly sensitive 0.1%-0.2% mutant allele detection

Through use of Unique Identifier (UID) technology and PiVAT error-suppression, the cell-free DNA assay detect variants in cfDNA samples down to 0.19% as shown in the table below.

Sample ID	Gene ID	Variant type	Allele Frequency (%)	Impact	HGVSC
sample 16	PTEN	SNV	0.19	Stop gained	NM_000314.4:c.1003C>T
Sample 15	TP53	SNV	0.21	Missense variant	NM_000546.5:c.733G>A
Sample 2	ALK	SNV	0.24	Missense variant	NM_004304.4:c.3824G>A
Sample 15	PTEN	SNV	0.32	Missense & splice region variant	NM_000314.4:c.494G>T
Sample 7	TP53	SNV	0.33	Missense variant	NM_000546.5:c.892G>A
Sample 16	ALK	SNV	0.42	Missense variant	NM_004304.4:c.3824G>A
Sample 5	TP53	SNV	0.61	Missense variant	NM_000546.5:c.577C>A
Sample 10	KRAS	SNV	0.65	Missense variant	NM_004985.3:c.182A>G
Sample 11	PTEN	SNV	0.65	Stop gained	NM_000314.4:c.1003C>T
Sample 3	TP53	SNV	0.75	Missense variant	NM_000546.5:c.998G>A
Sample 15	TP53	SNV	0.99	Missense variant	NM_000546.5:c.587G>A
Sample 15	TP53	SNV	1.34	Missense variant	NM_000546.5:c.1015G>A
Sample 4	EGFR	SNV	2.11	Missense variant	NM_005228.3:c.2573T>G
Sample 10	TP53	SNV	2.29	Splice acceptor variant	NM_000546.5:c.376-1G>A
Sample 2	EGFR	Delins	27.78	Protein altering variant	NM_005228.3:c.2239_2248 delTTAAGAGAAGinsC

ONCOReveal Product Portfolio

Product	Description	Catalog No.
ONCOReveal cfDNA Lung Panel	Targets 81 regions associated with lung cancer, designed for use with cfDNA for detection to 0.1-0.2% allele frequency sensitivity.	HLA-LL-1001-24
Other Panels		
ONCOReveal Lung and Colon Cancer Panel	Targets 103 regions associated with lung and colon solid tumors. Compatible with multiple sample types (DNA from fresh tissue, FFPE or biofluids) with sensitivity down to 1%.	HDA-LC-1001-24
ONCOReveal BRCA1 & BRCA2 Panel	Covers the entirety of the BRCA1 and BRCA2 genes. Detect SNVs and Indels up to 126 nt long.	HDA-BR-1001-24
ONCOReveal Multi-Cancer Panel	Targets 251 regions associated with multiple solid tumor tissue types. Compatible with multiple sample types (DNA from fresh tissue, FFPE or biofluids) with sensitivity down to 1%.	HDA-HS-1001-24
ONCOReveal Custom Panel	Design a custom panel using SLIMamp technology with all the benefits of a streamlined workflow and robust performance for your chosen genomic regions of interest.	HDA-HS-3001-24

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