ONCOReveal Lung and Colon Cancer Panel

An NGS enrichment panel targeting >1800 actionable hotspot mutations across 22 genes

- **Single well amplification from 2.5–80 ng of input DNA**
- **103 target amplicons**
- **>1,800 hotspots**
- **11 kb of genomic coverage**
- **Variant detection down to 1% frequency**
- **Same-day sample to sequencer with three hours hands-on time**

The ONCOReveal Lung and Colon Cancer Panel from Pillar Biosciences is a comprehensive NGS target enrichment solution for lung and colon tissue samples.

The Pillar Biosciences' ONCOReveal panels offer carefully selected target genes, same-day sample-to-sequencer with minimal hands-on time, high mapping and on-target rates, and high sensitivity and specificity.

Lung and Colon Panel 22-Gene List

AKT1	ALK	BRAF	CTNNB1	DDR2
EFGR	ERBB2	ERBB4	FBXW7	FGFR1
FGFR2	FGFR3	KRAS	MAP2K1	MET
NOTCH 1	NRAS	PIK3CA	PTEN	SMAD4
STK11	TP53			

Actionable target design

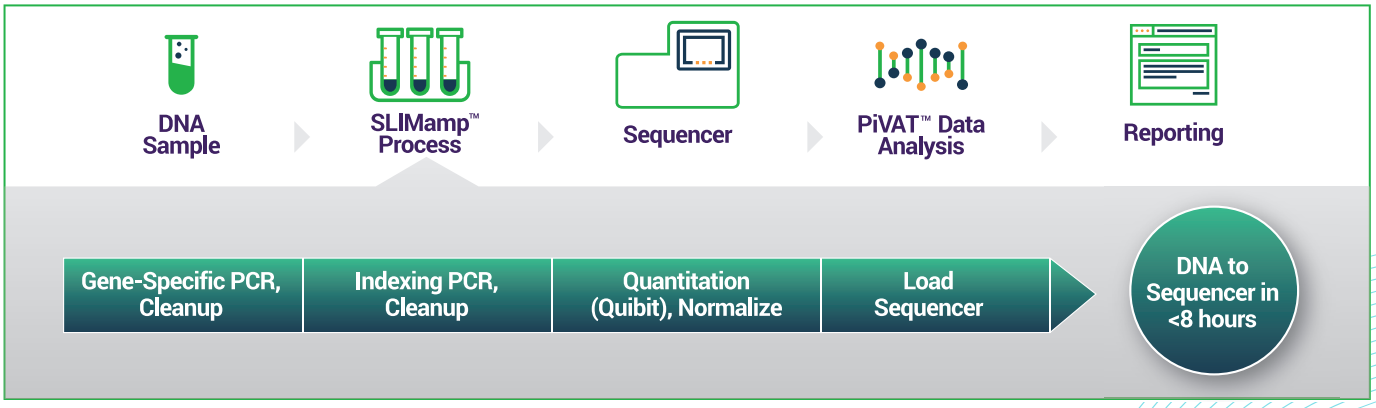
The target selection of the ONCOReveal Lung and Colon Cancer Panel is based on recent guidelines from many professional societies such as the College of American Pathologists (CAP) and verified from databases such as The Cancer Genome Atlas (TCGA).

The ONCOReveal Lung and Colon Panel targets 103 known regions of interest and both Single Nucleotide Variants (SNVs) and insertion-deletion mutations (Indels). With an average amplicon size is 145 bp, the entire panel has a total target size of 11 kb.

Panel Specifications

Number of genes	22
Target region	>1800 hotspots, 11 kb total size
Variant type	SNV, Indels
Ave. amplicon size	145 bp
Total amplicons	103
Input range	2.5-80 ng 10 ng recommended
Number of pools	1
Sample types	DNA from FFPE, WBCs, tissue and cfDNA

Streamlined Workflow



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ONCOReveal Lung and Colon Cancer Panel

PRODUCT SHEET

Enhance Target Specificity and Sequencing Confidence

Minimal hands-on, maximum results

Pillar Biosciences' SLIMamp technology (Stem-Loop Inhibition Mediated amplification) enables DNA to sequencer-ready library in less than 8 hours, with minimal sample handling.

The assay protocol has multiple stopping points for added flexibility.

Highly sensitive 1% mutant allele detection

In the table below results from multiple independent libraries* prepared from FFPE reference standards with known allele frequencies are shown, with accurate detection down to 1%.

Gene	NMID	c.Name	p.Name	hg19 position	CosmicID	rs-ID	Expected Allele Freq.	AlleleFreq detected*
NRAS	NM_002524.4	181C>A	Q61K	chr1:115256530G>T	COSM580	rs121913254	12.50%	10.3-14.7 %
PIK3CA	NM_006218.2	1633G>A	E545K	chr3:178936091G>A	COSM763	rs104886003	9.00%	7.5-8.7 %
PIK3CA	NM_006218.2	3140A>G	H1047R	chr3:178952085A>G	COSM775	rs121913279	17.50%	16.9-21.8 %
EGFR	NM_005228.3	2155G>A	G719S	chr7:55241707G>A	COSM6252	rs28929495	24.50%	21.4-27.6 %
EGFR	NM_005228.3	2235_2249del15	E746_ A750del5	chr7:55242465_55242479del15	COSM6223	rs121913421	2.00%	0.8-1.8 %
EGFR	NM_005228.3	2369C>T	T790M	chr7:55249071C>T	COSM6240	rs121434569	1.00%	0.9-2.0 %
EGFR	NM_005228.3	2573T>G	L858R	chr7:55259515T>G	COSM6224	rs121434568	3.00%	3.0-3.5 %
BRAF	NM_004333.4	1799T>A	V600E	chr7:140453136A>T	COSM476	rs113488022	10.50%	9.1-13.7 %
KRAS	NM_004985.4	38G>A	G13D	chr12:25398281C>T	COSM532	rs112445441	15.00%	14.9-16.6 %
KRAS	NM_004985.4	35G>A	G12D	chr12:25398284C>T	COSM521	rs121913529	6.00%	5.3-6.0 %
KRAS	NM_004985.4	c.183A>C	Q61H	chr12:25380275T>G	COSM554	rs17851045	5.00%	5.40%
KRAS	NM_004985.4	c.436G>A	A146T	chr12:25378562C>T	COSM19404	rs121913527	5.00%	6.10%
NRAS	NM_002524.4	35G>T	G12V	chr1:115258747C>A	COSM566	rs121913237	5.00%	4.80%
PIK3CA	NM_006218.2	1645G>A	D549N	chr3:178936103G>A	COSM17470	N/A	Het	48.1%[a]
TP53	NM_000546.5	404_405insC	Q136fs*13	chr17:7578525_7578526insG	COSM18568	N/A	Homo	94.0%[a]
BRAF	NM_004333.4	1397G>T	G466V	chr7:140481411C>A	COSM451	rs121913351	N/A	41.5%[b]
TP53	NM_000546.5	743_744delinsCT	R248P	chr17:7577537_7577538delinsAG	N/A	N/A	N/A	95.6.0%[b]
TP53	NM_000546.5	659A>G	Y220C	chr17:7578190T>C	COSM10758	rs121912666	N/A	84.2%[b]

* Ranges of allele frequencies were obtained from at least four independent library preps.

ONCOReveal Product Portfolio		
Product	**Description**	**Catalog No.**
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
Other Panels		
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 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
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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