

# Essential LBx Panel

The **oncoReveal® Essential LBx** panel is a robust NGS assay that interrogates 197 targets across 34 genes of interest from multiple solid tumor cancer types. This is a focused panel that can detect four types of variants from cell-free DNA (cfDNA) that has been extracted from plasma: single nucleotide variants (SNVs), small insertion/deletion (indel) variants, copy number amplification (CNA), and microsatellite instability (MSI). The panel uses proprietary Stem-Loop Inhibition-Mediated amplification (SLIMamp®) technology, a tiled amplicon-based library prep chemistry, designed by Pillar's AI-empowered VersaTile™ Primer Design tool, for efficient single-tube target enrichment.

## oncoReveal® Essential LBx Panel (34 genes)

AKT1	CTNNB1	FGFR2	KIT	PPP2R1A	SF3B1
ALK	EGFR	FGFR3	KRAS	PTCH1	SMAD4
AR	▲ ERBB2	GNA11	▲ MET	PTEN	TERT (promoter)
ATM	ERBB3	GNAQ	NRAS	RAC1	<b>TP53</b>
BRAF	ESR1	GNAS	PDGFRA	RET	
CDK4	▲ FGFR1	HRAS	PIK3CA	RNF43	

Copy Number Amplifications (CNAs) can also be detected in genes indicated by ▲  
Genes marked in **green** indicate full CDS coverage

### 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

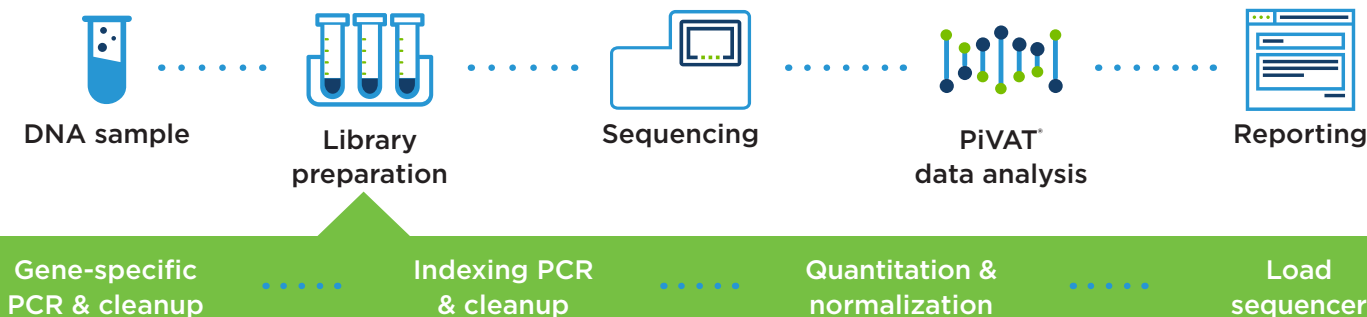
### Sensitive and robust chemistry

Achieve variant detection as low as 0.1% VAF<sup>+</sup> even with limited DNA input or poor sample quality

### Reduced fully-loaded lab costs

Improve lab efficiency and reduce “no calls”, repeat testing, and difficult interpretation decisions

## Simple, one-day workflow



<sup>+</sup> VAF, variant allele frequency  
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## Panel specifications\*

Enrichment chemistry	Multiplex PCR using tiled amplicons
Number of pools	1 pool
Number of genes/amplicons	34/201
Number of targets	Hotspots in 33 genes; full CDS coverage of TP53; 24 MSI sites; CNAs in 3 genes
Variant types	SNVs, indels, CNAs, and MSI
Average amplicon size	90bp
Recommended DNA input range	10ng to 30ng
Sample types	cfDNA from plasma
Mapping rate	≥90%
% on-target aligned reads	≥85%
Coverage uniformity (% targets with >0.2X mean coverage)	≥90%
Recommended Reads Per Sample	~10 million paired-end reads
Total assay time (from DNA to sequencer)	<8 hours

\* Mapping rate, percentage of on-target aligned reads, and coverage uniformity metrics are based on internal testing performed using reference standard materials

## Ordering information

Select the panel AND one of the index kit options listed below.

Panel	Part number
oncoReveal® Essential LBx Panel (24 reactions)	HLA-HS-1006-24

Pillar Unique Dual Index Kit Options	Reactions	Part number
Pillar Biosciences LBx Indexing Kit A	24 Combinations, 96 reactions	IDX-PI-1013-96
Pillar Biosciences LBx Indexing Kit B	24 Combinations, 96 reactions	IDX-PI-1014-96

TO ORDER OR LEARN MORE:  
[pillarbiosci.com](https://pillarbiosci.com)

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