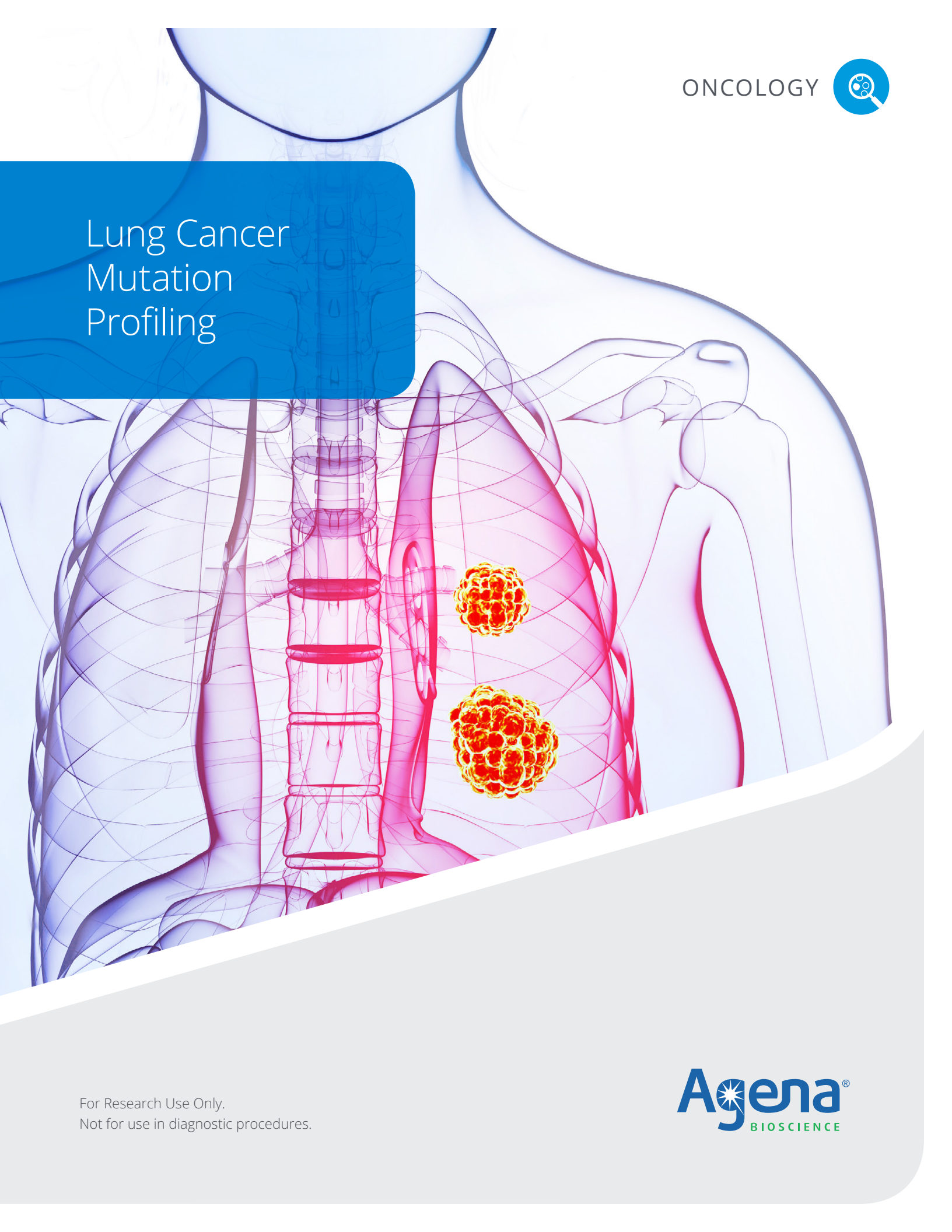


ONCOLOGY



# Lung Cancer Mutation Profiling



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

**Agena**<sup>®</sup>  
BIOSCIENCE

## Minimize Sample Rejection in Lung Cancer Testing

Mutation profiling of non-small cell lung cancer samples can be challenging due to limited quantity & poor quality of the specimens. Several technologies, including next generation sequencing, require specimens with high tumor content and generally reject as many as 20% of the samples due to low tumor fraction and DNA yield.<sup>1,2</sup>

### AGENA'S SOLUTION

#### ➤ **UltraSEEK® Lung Panel**

Enables study of disease progression and resistance from CTCs and ctDNA, detecting >75 variants from a single blood draw at as low as 0.1% minor allele frequency (MAF). Optimized for low and poor quality DNA, reducing sample rejection and workflow failure rate.

#### ➤ **iPLEX® HS Lung Panel**

Facilitates variant detection as low as 1% MAF from poor quality and degraded samples such as FFPE tissue, fine needle aspirates, core needle biopsies, smears, pleural fluid and cytology blocks.

#### ➤ **UltraSEEK EGFR Panel**

Conduct a focused study across clinically relevant variants in the EGFR gene including p.T790M, p.C797S, p.E746\_A750del and p.L858R.





## Genes & Mutations for Lung Panels

Pre-designed panels with content compliant with the NCCN guidelines across 5 genes for comprehensive profiling of lung cancer.

### UltraSEEK Lung Panel

Gene	Coverage*
BRAF	Codons 469 (exon 11), 594, 600 (exon 15)
EGFR	Exon 19 indels, exon 20 insertions and substitutions across exons 18, 19, 20 and 21
ERBB2	Exon 20 insertions
KRAS	Codons 12, 13 (exon 2) and 61 (exon 3)
PIK3CA	Codons 542, 545 (exon 9) and 1047 (exon 20)

### iPLEX HS Lung Panel

Gene	Coverage*
BRAF	Codons 469 (exon 11), 594, 600 (exon 15)
EGFR	Exon 19 indels, exon 20 insertions and substitutions across exons 18, 19, 20 and 21
ERBB2	Exon 20 insertions
KRAS	Codons 12, 13 (exon 2) and 61 (exon 3)
PIK3CA	Codons 542, 545 (exon 9) and 1047 (exon 20)

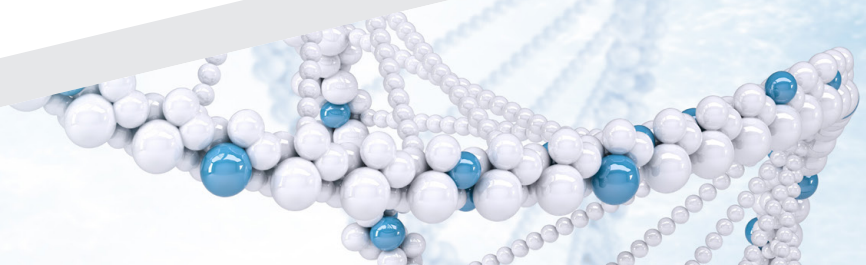
### UltraSEEK EGFR Panel

Gene	Coverage*
EGFR	Exon 19 deletions and substitutions across Exon 20 & 21

\* Complete variant list available upon request

## ASSAY WORKFLOW

DNA to data in as little as 8 hours, with minimal manual processing time enables greater lab efficiency. Simplified reporting with automated software generates clear results.



## ORDERING INFORMATION

Catalog No.	Item	Sample Type	# Samples	Chip Format
13263F	UltraSEEK EGFR Panel Set - CPM (2x96)	Plasma	192	CPM 96
13264F	UltraSEEK Lung Panel Set - CPM (5x96)	Plasma	40	CPM 96
13267F	iPLEX HS Lung Panel Set - CPM (5x96)	Tissue	60	CPM 96
13334D	iPLEX HS Lung Panel Set - CPM (2x384)	Tissue	96	CPM 384
13335D	iPLEX HS Lung Panel Set - CPM (10x384)	Tissue	480	CPM 384

*The panel sets contain assay specific primers and all the required reagents to process DNA samples on the MassARRAY® system.*

## References

1. R. Avula et al. Assessment of UltraSEEK Colon Cancer Panel for Detection of Low Frequency Somatic Mutations in Blood. Poster session presented at: Association of Molecular Pathology Annual Meeting; 2017 Nov 16-18; Salt Lake City, UT.
2. R.T. Birse, D. Irwin. Reliable Detection of Low Abundance Somatic Mutations of EGFR, KRAS, BRAF, NRAS and PIK3CA in Metastatic Colorectal Adenocarcinomas Using iPLEX HS, a New Highly Sensitive Assay for MassARRAY. Poster session presented at Association of Molecular Pathology Annual Meeting; 2016 Nov 10-12; Charlotte, NC.

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