



## Lung Cancer Panels

# Overcome Challenges in Mutation Profiling of Lung Cancer Samples

Mutation profiling of non-small cell lung carcinoma (NSCLC) samples can be difficult due to limited sample quantity and poor sample quality. On average, approximately 20% of samples are rejected due to low DNA concentration, quality, and tumor percentage.<sup>1,2</sup> You can decrease the number of rejected samples, reduce workflow failure rate, and minimize sample retesting using optimized panels developed for use on the MassARRAY® System.

The iPLEX® HS Lung Panel facilitates mutation detection as low as 1% allele frequency from poor quality and degraded samples such as FFPE tissue, FNA, and cytology blocks.

The highly sensitive UltraSEEK™ Lung Panel enables disease progression and resistance monitoring from circulating tumor cells (CTCs) and circulating tumor DNA (ctDNA), detecting mutations as low as 0.1% allele frequency.

- ✓ Utilize as little as 10 ng of input DNA
- ✓ Identify mutations across *BRAF*, *EGFR*, *ERBB2*, *KRAS*, and *PIK3CA* genes
- ✓ Achieve reliable results in as fast as one day, using any sample type

With a robust, PCR-based workflow and easy to analyze mutation reports, these targeted panels generate results relevant to your lung cancer research.

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

Agena Bioscience, Inc.  
4755 Eastgate Mall  
San Diego, CA 92121  
Phone: +1.858.882.2800

Order Desk: +1.858.202.9301  
Order Desk Fax: +1.858.202.9220  
orderdesk@AgenaBio.com  
Web: agenabioscience.com

**US:** +1.877.4.GENOME  
**EU:** +49.40.899676.0  
**AP:** +61.7.3088.1600  
**CN:** +86.21.6427.0566

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## GENES AND MUTATIONS

Pre-designed panels across 5 genes for comprehensive profiling of lung cancer.

GENE	COVERAGE	# OF MUTATIONS*	
		iPLEX® HS LUNG PANEL	ULTRASEEK™ LUNG PANEL
<b>BRAF</b>	Codon 469 of exon 11; codons 594, 600 of exon 15	4	4
<b>EGFR</b>	Exon 19 indels, exon 20 insertions, and substitutions across exons 18, 19, 20, and 21	46	43
<b>ERBB2</b>	Exon 20 insertions	2	2
<b>KRAS</b>	Codons 12, 13 of exon 2; codon 61 of exon 3	14	14
<b>PIK3CA</b>	Codons 542, 545 of exon 9; codon 1047 of exon 20	4	4

\* Complete mutation list available upon request

## WORKFLOW



DNA to data in ~8 hours with less than 30 minutes of manual processing time enables greater lab efficiency. Simplified reporting with automated software generates clear results.

## ORDERING INFORMATION

ITEM	CATALOG NO	SAMPLES/KIT
iPLEX® HS Lung Panel *	17941	120
UltraSEEK™ Lung Panel +	17943	80

\* Requires additional iPLEX Pro reagents; + Requires additional UltraSEEK reagents

Contact your local Agena Bioscience representative for more information.

## REFERENCES

- Roy-Chowdhuri, Sinchita, et al. "Factors Affecting the Success of Next-Generation Sequencing in Cytology Specimens." *Cancer Cytopathology* 123.11 (2015): 659-668.
- Raney, J. A., et al. "Lessons Learned in the Clinical Lab: Factors Affecting Successful Library Construction of FFPE Samples for Somatic Mutation Detection." Poster session presented at: Association for Molecular Pathology Annual Meeting; 2016 Nov 10-12; Charlotte, NC.
- R.T. Birse, D. Irwin. Assessment of Common Somatic Mutations of EGFR, KRAS, BRAF, NRAS and PIK3CA in Pulmonary Adenocarcinoma Using iPLEX HS, a new Highly Sensitive Assay for MassARRAY. Poster session presented at: Association for Molecular Pathology Annual Meeting; 2016 Nov 10-12; Charlotte, NC.
- Mosko, Michael J., et al. "Ultrasensitive Detection of Multiplexed Somatic Mutations Using MALDI-TOF Mass Spectrometry." *The Journal of Molecular Diagnostics* 18.1 (2016): 23-31.

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