

THE SCIENCE OF TUMOR BIOLOGY



Highly sensitive profiling of 250+ hot spot mutations




MassARRAY® System



TARGET. CONFIRM. CAPTURE.

High-throughput somatic mutation profiling for lung cancer research.

Agena Bioscience's LungCarta® Panel v1.0 provides a highly sensitive panel of assays for the evaluation of more than 250 somatic mutations in 26 oncogenes and tumor suppressors for targeted confirmation of genetic events in non-small cell lung tumors. The LungCarta Panel is a compilation of key mutations identified via sequencing discovery studies that affect key pathways in lung adenocarcinoma tumors.¹

-  Use tumor samples from fresh, frozen, or formalin-fixed paraffin-embedded tissues (FFPE) and/or cell lines.
-  Screen more than 250 mutations in parallel.
-  Detect and quantify mutations with frequencies/abundance as low as 5%.

Assays by Agena also offers panels covering additional oncogenes and somatic mutations. See www.agenabio.com/oncology for more information.

GENES INCLUDED IN THE LUNGCARTA PANEL v1.0

AKT1	JAK2	NTRK3
ALK	KRAS	PIK3CA
BRAF	MAP2K1	PTCH1
DDR2	MET	PTEN
EGFR	NOTCH1	PTPN11
EPHA3	NRAS	PTPRD
EPHA5	NRF2	STK11
ERBB2	NTRK1	TP53
FGFR4	NTRK2	

See back for complete list of mutations.

REFERENCE

1. Ding, L. et al. *Nature*. 455(7216):1069-1075.

vA



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

Agena Bioscience, Inc. USA
3565 General Atomics Court
San Diego, CA 92121
Phone: +1.877.4.GENOME
Fax: +1.858.202.9220

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

US: +1.877.4.GENOME
EU: +49.40.899676.0
AP: +61.7.3088.1600
JP: +81.3.6231.0727
CN: +86.10.8048.0737

51-20013R1.0 1014

Agena
BIOSCIENCE

THE MASSARRAY WORKFLOW

Each sample is subjected to PCR amplification and primer extension with the LungCarta Panel v1.0 reagents. The extension products are dispensed onto a SpectroCHIP® Array and detected via MassARRAY MALDI-TOF mass spectrometry. After the sample run, an automated software report provides the calls and mutation frequency for each sample as well as a confidence score.


THROUGHPUT

The LungCarta Panel v1.0 contains multiplexed assays in 24 wells. The panel can be run in 96-well format (4 samples per plate) or 384-well format (16 samples per plate). Four to 128 samples can be processed per day, providing flexibility in sample throughput and batching requirements.

ORDERING INFORMATION

CAT NO	FORMAT	SAMPLES/KIT
24016	10 x 96	40
24015	2 x 384	32

LUNGCARTA PANEL v1.0 COMPONENTS

AMPLIFY  PCR Enzyme
PCR Accessory Set
LungCarta v1.0 PCR Primers

EXTEND  iPLEX® Pro Reagent Set
LungCarta v1.0 Extend Primers

DETECT  SpectroCHIP Array
and Resin Kit

ANALYZE  Typer Software

LUNGCARTA PANEL v1.0 GENES AND MUTATIONS

GENE	MUTATION
AKT1	E17K
ALK	C1156Y, L1196M
BRAF	G469S/E/A/V, D594G/V, L597Q/V, V600E/K/M
DDR2	L63V, I120M, D125Y, L239R, G253C, G505S, C580Y, I638F, T765P, G774E/V
EGFR	R108K, T263P, A289V, G598V, E709A/G/V, E709K/H, G719S/C/A/D, E746_T751>A, E746_T751>S, E746_T751>V, E746_S752>A, E746_S752>D, E746_S752>I, E746_S752>V, L747S, L747_E749del, L747_A750del, L747_A750>P, L747_T751>P, L747_S752del, L747_P753>Q, L747_P753>S, A750P, T751A, T751I, T751P, S752F, S752_I759del, P753Q, P753S, D761Y/N, M766_A767insAI, S768I, V769_D770insASV, V769_D770insCV, D770fs*61, D770_N771insAPW, D770_N771insG, D770_N771insGL, D770_N771>AGG/N771>GF, N771T, N771_P772>SVDNR, P772_H773insV, H773N, H773_V774insNPH/PH/H, V774L, V774_C775insHV, R776C/H, T790M, T854A, L858R/M, L861Q/L861R
EPHA3	T37K, N85S, T166N, G187R, S229Y, W250R, M269I, N379K, T393K, A435S, D446Y, S449F, G518L, K761N, G766E, D806N
EPHA5	D493Y, S566Y, G582E, S810I, T856I, R1007Q, N1032S, M1034I
ERBB2	M774_A775insAYVM, A775_G776insAYVM
FGFR4	H192fs*19, P672T
JAK2	P503L, L609S, Y931C, R1122P
KRAS	G12S/V/F/R/A/C/D, G13C/S/A/V/D, Q61L/R/P/H/E/K
MAP2K1	Q56P, K57N, D67N
MET	N375S, 982_1028del47
NOTCH1	D1643H, V1672I, T1997M, H2276fs*79, R2328W, V2444fs*35
NRAS	Q61E/K/H/L/R/P
NRF2	D29H, G31A, R34Q, D77N/A, E79Q/K/G, G81D
NTRK1	Q80*, R119H, S326R
NTRK2	C45F, L138F, G261R, Q666R, L670M, L755L
NTRK3	L152I, S184C, L248M, L270M, T283K, V307L, L336Q, R721G, I769N
PIK3CA	E542Q/K, E545Q/K, H1047Y/R/L
PTCH1	R682L, R1308G, S1326fs*46
PTEN	R233*
PTPN11	E76V
PTPRD	T337A, V483E, S1703R
STK11	I26fs*25, Q37L, A43_L50del6, L50_D53del4, M51fs*14, G56fs*4, G56W, E70*, E70fs*26, K78E, R86G, G91L, E120*, Q123R, Q137*, Q159*, G163C, E165*, Q170*, H174R, P179L, G188fs*99, K191*, G196V, V197fs*69, Q220*, E223*, V236fs*30, Y272Y, L285Q, D327fs*10, A347fs*13, F354L, R426W
TP53	V157F, R158C/G/L/P, Y163C, R175L/H, Y220C, G245C/S, G245D/V, R248G/L/Q/W, R249S/W/M, R273C/H/L/P, R282G/W

vA

The MassARRAY System, LungCarta Panel, iPLEX Pro Reagents, SpectroCHIP Array, and Typer Software are For Research Use Only. Not for use in diagnostic procedures.

Agena Bioscience's patented nucleic acid analysis by mass spectrometry methods and products are protected under United States patent rights including but not limited to 5,869,242; 6,024,925; 6,238,871; 6,258,538; 6,300,076; 6,440,705; 6,500,621; 6,558,623; 6,569,385; 6,979,425; 6,994,969; 7,019,288; 7,025,933; 7,285,422; 7,332,275; 7,390,672; 7,419,787; 7,501,251; 7,888,127; 8,003,317; 8,034,567; 8,315,805; and 8,349,566 and patents pending including but not limited to US20050272070 and US20130017960, and foreign counterparts including but not limited to, EP0815261B1, EP1173622B1, EP1727911B1, EP1546385B1, EP1332000B1, EP1613723B1, EP1660680B1, and EP2107129B1.

MassARRAY, iPLEX, LungCarta, and SpectroCHIP are registered trademarks and Agena and Agena Bioscience are trademarks of Agena Bioscience, Inc. ©2014 Agena Bioscience, Inc. All rights reserved.