



LungCarta® Panel

High Throughput Somatic Mutation Profiling for Lung Cancer Research

Agena Bioscience's LungCarta® Panel is a highly sensitive set 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 (FFPE) tissues and/or cell lines.
- ✓ Screen more than 250 mutations in parallel.
- ✓ Detect and quantify mutation frequencies as low as 5%.

Agena Bioscience also offers panels covering additional oncogenes and somatic mutations. Visit www.agenabioscience.com for more information.

GENES INCLUDED IN THE LUNGCARTA® PANEL

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

See back for complete list of mutations.

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

51-20013R3.0 1216

Agena
BIOSCIENCE

THE MASSARRAY WORKFLOW

Each sample is subjected to PCR amplification and primer extension with the LungCarta Panel reagents. The extension products are dispensed onto a SpectroCHIP® Array and detected via MassARRAY® 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 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

PANEL COMPONENTS

AMPLIFY		PCR Enzyme PCR Accessory Set LungCarta® PCR Primers
EXTEND		iPLEX® Pro Reagent Set LungCarta Extend Primers
DETECT		SpectroCHIP® Array and Clean Resin
ANALYZE		MassARRAY® Analysis Software

REFERENCE

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

LUNGCARTA PANEL 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

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

MassARRAY, LungCarta, iPLEX, and SpectroCHIP are registered trademarks of Agena Bioscience, Inc. Agena Bioscience is a trademark of Agena Bioscience, Inc. ©2016 Agena Bioscience, Inc. All rights reserved.