

# THE SCIENCE OF RAPID MUTATION SCREENING



Highly sensitive profiling of more than 230 mutations and 19 oncogenes




MassARRAY® System



## IDENTIFY. SCREEN. CONFIRM.

Screen for important genetic markers in cancer pathways using rapid, parallel analysis of more than 230 somatic mutations across 19 common oncogenes.

Agena Bioscience's OncoCarta™ Panel v1.0 is a set of pre-validated assays covering 90-95% of known druggable markers for cost-effective, efficient mutation screening for your clinical research trials.

-  Use tumor samples from fresh, frozen, or formalin-fixed paraffin-embedded tissues (FFPE) and/or cell lines.
-  Analyze more than 230 mutations with as little as 240 ng DNA per sample.
-  Detect and quantify mutations with frequencies from  $\leq 10\%$ .

Assays by Agena also offers panels covering additional oncogenes and somatic mutations. See [www.agenabio.com/oncology](http://www.agenabio.com/oncology) for more information.

### GENES INCLUDED IN THE ONCOCARTA PANEL v1.0

ABL1	FGFR1	MET
AKT1	FGFR3	NRAS
AKT2	FLT3	PDGFA
BRAF	HRAS	PIK3CA
CDK4	JAK2	RET
EGFR	KIT	
ERBB2	KRAS	

See back for complete list of mutations.

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

51-20010R1.0 1014

**THE MASSARRAY WORKFLOW**

Each sample is subjected to PCR amplification and primer extension with the OncoCarta 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 OncoCarta 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
10176	10 x 96	40
10225	2 x 384	32

**ONCOCARTA PANEL v1.0 COMPONENTS**

<b>AMPLIFY</b>		PCR Enzyme PCR Accessory Set OncoCarta v1.0 PCR Primers
<b>EXTEND</b>		iPLEX® Pro Reagent Set OncoCarta v1.0 Extend Primers
<b>DETECT</b>		SpectroCHIP Array and Resin Kit
<b>ANALYZE</b>		Typer Software

**ONCOCARTA PANEL v1.0 GENES AND MUTATIONS**

GENE	MUTATION
<b>ABL1</b>	G250E, Q252H, Y253H, Y253F, E255K, E255V, D276G, F311L, T315I, F317L, M351T, E355G, F359V, H396R
<b>AKT1</b>	E17K, Q43X, V167A, E319G, L357P, P388T, V461L
<b>AKT2</b>	S302G, R371H
<b>BRAF</b>	G464R, G464V/E, G466R, F468C, G469A, G469E, G469R, G469S, G469V, D594V/G, F595L, G596R, L597Q, L597R, L597S, L597V, T599I, V600E, V600K, V600L, V600R, K601N, K601E
<b>CDK4</b>	R24C, R24H
<b>EGFR</b>	R108K, T263P, A289V, G598V, E709A/G/V, E709K/H, G719A, G719S/C, E746_A750del, E746_T751del, E746_T751>A, E746_T751>S, E746_T751>V, E746_S752>V, E746_S752>D, E746_S752>A, E746_S752>I, L747S, L747_E749del, L747_A750del, L747_A750>P, L747_T751del, L747_T751>P, L747_S752del, L747_P753>Q, L747_P753>S, A750P, T751A, T751P, T751I, S752F, S752_I759del, P753Q, M766_A767insAI, S768I, V769_D770insASV, V769_D770insCV, D770_N771>AGG/N771>GF, D770_N771insG, D770_N771insGF, D770_N771insGL, D770fs*61/D770_N771insAPW, N771T, P772_H773insV, H773N, H773_V774insNPH, H773_V774insPH, H773_V774insH, V774_C775insHV, T790M, L858R, L861Q
<b>ERBB2</b>	L755P, A775_G776insYVMA, G776S/LC, G776VC/VC, S779_P780insVGS, P780_Y781insGSP
<b>FGFR1</b>	S125L, P252T
<b>FGFR3</b>	G370C, Y373C, A391E, K650Q/E, K650T/M
<b>FLT3</b>	D835H/Y, I836del
<b>HRAS</b>	G12V/D, G13C/R/S, Q61H/H, Q61L/R/P, Q61K
<b>JAK2</b>	V617F
<b>KIT</b>	D52N, Y503_F504insAY, K550_K558del, P551_V555del, M552L, Y553_Q556del, W557R/R/G, K558_V560del, K558_E562del, V559del, V559D/A/G, V559I, V559_V560del, V560D/G, V560del, E561K, Y568D, Y570_L576del, L576P, D579del, F584S, P585P, K642E, D816H/Y, D816V, V825A, E839K
<b>KRAS</b>	G12A, G12C, G12D, G12F, G12R, G12S, G12V, G13V/D, A59T, Q61E/K, Q61H/H, Q61L/R/P
<b>MET</b>	R970C, T992I, Y1230C, Y1235D, M1250T
<b>NRAS</b>	G12C/R/S, G12V/A/D, G13C/R/S, G13V/A/D, A18T, Q61E/K, Q61H, Q61L/R/P
<b>PDGFRA</b>	V561D, S566_E571>K, T674I, F808L, D842_H845del, D842V, I843_D846del, I843_S847>T, D846Y, N870S, D1071N
<b>PIK3CA</b>	R38H, R88Q, N345K, C420R, P539R, E542K, E545K, Q546K, H701P, C901F, M1043I, H1047R/L, H1047Y
<b>RET</b>	E632_L633del, C634R, C634W, C634Y, A664D, M918T

vA

The MassARRAY System, OncoCarta 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, and SpectroCHIP are registered trademarks and OncoCarta, Agena, and Agena Bioscience are trademarks of Agena Bioscience, Inc. ©2014 Agena Bioscience, Inc. All rights reserved.

