

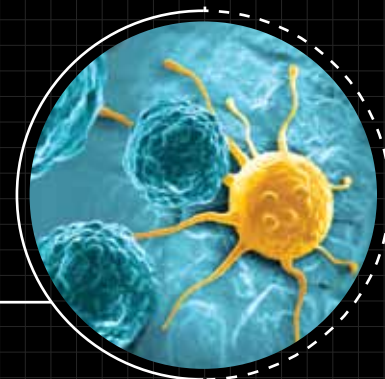
THE SCIENCE OF

RARE MUTATION DETECTION

UltraSEEK™ Oncogene Panel v1.0

Multiplexed ultrasensitive
mutation detection




MassARRAY® System



COMPARE, CONFIRM, OR IDENTIFY LOW FREQUENCY MUTATIONS

Screen for low abundance somatic mutations in heterogeneous tumor and blood samples at $\leq 1\%$ frequency.

Agena Bioscience's UltraSEEK™ Oncogene Panel v1.0 is a set of pre-validated assays comprising 26 driver mutations in 12 oncogenes commonly observed in neoplastic cells from various tumor types, for use on the MassARRAY® System. The panel offers a novel approach for ultrasensitive multiplexed mutation detection to aid in translational and clinical research studies.

-  Compare mutation profiles for matched tissue, circulating cell-free DNA, and tumor cell DNA samples.
-  Identify mutations that may not have been detected with lower sensitivity methods.
-  Confirm mutation status from other molecular methods, including Agena Bioscience's OncoCarta™ Panel or next generation sequencing panels.

UltraSEEK Oncogene Panel requires only 40 ng input DNA to assay. Only non-synonymous coding mutations previously reported to occur in human tumor samples were selected, including those in key genes implicated in resistance to tyrosine kinase inhibitors.



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

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THE MASSARRAY WORKFLOW






The UltraSEEK Oncogene Panel consists of multiplex PCR followed by a mutation-specific single base extension reaction.

The UltraSEEK Oncogene Panel requires 4 wells per sample tested. In addition to the mutation-specific markers, each well contains six controls to gauge the performance of the process, including bead capture, clean-up, and elution steps. The extension reaction utilizes a single mutation-specific chain terminator labeled with a moiety for solid phase capture. After capture, clean-up, and elution, products are spotted onto a SpectroCHIP® Array for MALDI-TOF analysis on the MassARRAY System.

THROUGHPUT

The UltraSEEK Oncogene Panel contains multiplexed assays in 4 wells. The panel can be run in 96-well format (24 samples per plate) or 384-well format (96 samples per plate). Twenty-four to several hundreds of samples can be processed per day, providing flexibility in sample throughput and batching requirements.

ULTRASEEK ONCOGENE PANEL COMPONENTS*

AMPLIFY		PCR Enzyme PCR Accessory Set UltraSEEK Oncogene PCR Primers
EXTEND		UltraSEEK Accessory Set UltraSEEK Termination Mixes UltraSEEK Oncogene Extend Primers
CAPTURE		UltraSEEK Capture Reagent Set Streptavidin Beads and Buffers
DETECT		SpectroCHIP Array and Resin Kit (1 x 384, 4 x 96, 2 x 96)
ANALYZE		UltraSEEK HTML Report Tool (Typer)

*A plate magnetic stand is required but not included. Please contact Agena Bioscience for recommendations.

ULTRASEEK ONCOGENE PANEL V1.0 GENES AND MUTATIONS

GENE	AA
ABL1	T315I
AKT1	E17K
ALK	F1174L
BRAF	V600E
	V600K
	V600R
EGFR	G719S
	T790M
	L861Q
	E746-A750del
FLT	1836del
IDH1	R132H
IDH2	R140Q
	R172K
JAK2	V617F
KRAS	G12A
	G12D
	G12V
	G12C
	G12S
	G13D
NRAS	Q61K
	Q61R
PIK3CA	E545K
	E542K
	H1047R

ORDERING INFORMATION

CAT NO	FORMAT	SAMPLES/KITS
27600	1 x 384	96
27601	4 x 96	96
27602	2 x 96	48

The UltraSEEK Oncogene Panel, OncoCarta Panel, MassARRAY System, Typer software, and SpectroCHIP Array 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 20050272070 and 20130017960, and foreign counterparts including but not limited to, EP0815261B1, EP1173622B1, EP1727911B1, EP1546385B1, EP1332000B1, EP1613723B1, EP1660680B1, and EP2107129B1.

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