



Detect Key Pharmacogenetic Variations with the MassARRAY® System

The iPLEX® PGx Pro Panel is a set of pre-designed SNP, INDEL, and CNV assays, for use with the MassARRAY® System, for the investigation of polymorphisms with known relevance to drug metabolism.

- ✓ Rapidly detect the most important haplotypes related to 36 key genes that are known to influence drug metabolism.
- ✓ Obtain biologically relevant data from greater than 99% of assays in the PharmaADME working group core list.¹
- ✓ Process from 10 to over 300 DNA samples per day.
- ✓ Identify SNPs, INDELs, and copy number variants (CNVs) from the same multiplex reaction well.

Assays by Agena also offers panels for in-depth analysis of *CYP2D6*, *CYP2C19*, and *CYP2C9/VKORC1*.

Visit www.agenabioscience.com for more information.

GENES ANALYZED WITH THE iPLEX® PGx PRO PANEL

<i>ABCB1</i>	<i>CYP2C8</i>	<i>GSTT1</i>	<i>SLCO1B3</i>
<i>ABCC2</i>	<i>CYP2C9</i>	<i>GSTT2b</i>	<i>SLCO2B1</i>
<i>ABCG2</i>	<i>CYP2D6</i>	<i>NAT1</i>	<i>SULT1A1</i>
<i>COMT</i>	<i>CYP2E1</i>	<i>NAT2</i>	<i>TPMT</i>
<i>CYP1A1</i>	<i>CYP3A4</i>	<i>SLC15A2</i>	<i>UGT1A1</i>
<i>CYP1A2</i>	<i>CYP3A5</i>	<i>SLC22A1</i>	<i>UGT2B15</i>
<i>CYP2A6</i>	<i>DPYD</i>	<i>SLC22A2</i>	<i>UGT2B17</i>
<i>CYP2B6</i>	<i>GSTM1</i>	<i>SLC22A6</i>	<i>UGT2B7</i>
<i>CYP2C19</i>	<i>GSTP1</i>	<i>SLCO1B1</i>	<i>VKORC1</i>

See back for detailed list of haplotypes.

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

THE MASSARRAY WORKFLOW

The iPLEX PGx Pro Panel contains specific pre-designed PCR primers, extension primers, and iPLEX Pro reagents. Samples are analyzed in eight multiplex wells, each with 10 ng of genomic DNA, from fresh or frozen whole blood or cells. After sample processing, the MassARRAY mass spectrometer is used for genotype detection and quantification. Haplotype reports are automatically generated using MassARRAY analysis software.





THROUGHPUT

The iPLEX PGx Pro Panel contains multiplexed assays in 8 wells. The panel can be run in 24-well format (3 samples per plate), 96-well format (12 samples per plate), or 384-well format (48 samples per plate). Three to 384 samples can be processed per day, providing flexibility in sample throughput and batching requirements.

ORDERING INFORMATION

CAT NO	FORMAT	SAMPLES/KIT
29000	8x24	24
10302	2 x 96	24
10299	2 x 384	96
10297	10 x 96	120
10298	10 x 384	480

PANEL COMPONENTS

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

‡ If only mutations are present (i.e. no * allele), only the number of mutations detected plus WT is counted; combinations of different mutations have been observed but are not counted toward haplotype groups.

§ For COMT, A-F are arbitrary haplotypes as only *1 and *2 are mentioned in the literature.

1. Williams JA, et al. PhRMA White Paper on ADME Pharmacogenomics. *J Clin Pharmacol.* 2008;48:849-889.

GENE	NUMBER OF HAPLOTYPE GROUPS‡	HAPLOTYPES (Haplotypes which are indistinguishable with the iPLEX® PGx Pro Panel are shown in parentheses)
<i>ABCB1</i>	11	*1, (*1e;g;h;p), (*2;*12;*15), *4, *6, (*8;*16), (*8A;*16A), *9, (*10;*13;*17), *11, *18
<i>ABCC2</i>	7	(*1A;*1B;*3), *1C, *2, *4, *5, *6, *7
<i>ABCG2</i>	3‡	WT, Q141K, Q126X
<i>COMT</i> §	8	*1, *2, A, B, C, D, E, F
<i>CYP1A1</i>	9	*1, *2, *3, *4, *5, *6, *7, *8, *9
<i>CYP1A2</i>	6	*1A, *1C, *1K, *1L, (*1F;J), *7
<i>CYP2A6</i>	13 plus CNV	*1, *1X2b, *2, *5, *6, (*7;*10;*19;*36;*37), *8, (*9;*13;*15), *11, *12, *17, *20, *26
<i>CYP2B6</i>	7 plus CNV	*1, (*2;*10), (*6;*7;*19;*20;*29), *8, *13, (*16;*18), *28
<i>CYP2C8</i>	7	*1, *2, *3, *4, *5, *7, *8
<i>CYP2C9</i>	15	*1, *2, (*3;*18), *4, *5, *6, *8, *9, *10, *11, *12, *13, *15, *25, *27
<i>CYP2C19</i>	12	*1, (*1B;C;*9), *2, *3, *4, *5A, *5B, *6, *7, *8, *12, *17
<i>CYP2D6</i>	32 plus CNV	*1A, (*2A;*31;*51), (*2L;*35;*71), *3, *4, *4M, *6, *7, *8, *9, (*10;*36;*37; *47;*49;*52;*54;*57;*65;*72), *11, *12, *14A, *14B, *15, *17, *18, *19, *20, *21A, *21B, *30, *40, *41, *42, *44, *56A, *56B, *58, *64, *69
<i>CYP2E1</i>	3	*1, *2, *7
<i>CYP3A4</i>	5	*1, *2, *6, *20, *22
<i>CYP3A5</i>	6	*1, *3, *5, *6, *7, (*3K;*10)
<i>DPYD</i>	6	*1, *2, *7, *8, *9, *10
<i>GSTM1</i>	2 plus CNV	*A, *B
<i>GSTP1</i>	4	A, B, C, D
<i>GSTT1</i>	CNV only	
<i>GSTT2b</i>	CNV only	
<i>NAT1</i>	8	*4, *5, *14, *17, *19, *22, *15, *11
<i>NAT2</i>	33	*4, *5, *5A, *5C, *5D, *5E, *5G, *5J, *5K, *5P, *6, *6B, *6C, *6E, *6F, (*6I;J), *7A, *7B, *7C, *11, *12, (*12B;E), *12C, *13, *14, (*14B;H), *14C, *14D, *14E, *14F, *14G, *14I, *19
<i>SLC15A2</i>	3	*1, *2, *3
<i>SLC22A1</i>	16‡	WT, AAGTTGGT, TGGTAAGT, R61C, C88R, G220V, P283L, R287G, P341L, G401S, M408V, M420X-1, M420X-2, M420X-3, M420I, G465R
<i>SLC22A2</i>	6‡	WT, P54S, M165V, S270A, R400C, K432Q
<i>SLC22A6</i>	2‡	WT, R50H
<i>SLCO1B1</i>	11	(*1A,*4,*6,*7,*8), (*1B;*14), *2, *3, *5, *9, *10, *11, *12, *13, (*15;*16;*17)
<i>SLCO1B3</i>	3‡	WT, S112A, M233I
<i>SLCO2B1</i>	2‡	WT, S464F
<i>SULT1A1</i>	4 plus CNV	(*1;*5;*6), (*2;*7), *3, *4
<i>TPMT</i>	7	*1, *2, (*3A;*3D), *3B, *3C, *4, *8
<i>UGT1A1</i>	7	*1, *6A, *6B, *7, *27, *29, *60
<i>UGT2B15</i>	2‡	WT, Y85D
<i>UGT2B17</i>	CNV only	
<i>UGT2B7</i>	2	*1, *2
<i>VKORC1</i>	4	*1, *2, *3, *4

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