iPLEX® PGx Pro Panel

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

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

See back for detailed list of haplotypes.

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

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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 96-well format (12 samples per plate) or 384-well format (48 samples per plate). Twelve to 384 samples can be processed per day, providing flexibility in sample throughput and batching requirements.

ORDERING INFORMATION

CAT NO	FORMAT	SAMPLES/KIT
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)
ABCB1	11	*1, (*1e;g;h;p), (*2;*12;*15), *4, *6, (*8;*16), (*8A;*16A), *9, (*10;*13;*17), *11, *18
ABCC2	7	(*1A;*1B;*3), *1C, *2, *4, *5, *6, *7
ABCG2	3‡	WT, Q141K, Q126X
COMT§	8	*1, *2, A, B, C, D, E, F
CYP1A1	9	*1, *2, *3, *4, *5, *6, *7, *8, *9
CYP1A2	6	*1A, *1C, *1K, *1L, (*1F;J), *7
CYP2A6	13 plus CNV	*1, *1X2b, *2, *5, *6, (*7;*10;*19;*36;*37), *8, (*9;*13;*15), *11, *12, *17, *20, *26
CYP2B6	7 plus CNV	*1, (*2;*10), (*6;*7;*19;*20;*29), *8, *13, (*16;*18), *28
CYP2C8	7	*1, *2, *3, *4, *5, *7, *8
CYP2C9	15	*1, *2, (*3;*18), *4, *5, *6, *8, *9, *10, *11, *12, *13, *15, *25, *27
CYP2C19	12	*1, (*1B;C;*9), *2, *3, *4, *5A, *5B, *6, *7, *8, *12, *17
CYP2D6	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
CYP2E1	3	*1, *2, *7
CYP3A4	5	*1, *2, *6, *20, *22
CYP3A5	6	*1, *3, *5, *6, *7, (*3K;*10)
DPYD	6	*1, *2, *7, *8, *9, *10
GSTM1	2 plus CNV	*A, *B
GSTP1	4	A, B, C, D
GSTT1	CNV only	
GSTT2b	CNV only	
NAT1	8	*4, *5, *14, *17, *19, *22, *15, *11
NAT2	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
SLC15A2	3	*1, *2, *3
SLC22A1	16‡	WT, AAGTTGGT, TGGTAAGT, R61C, C88R, G220V, P283L, R287G, P341L, G401S, M408V, M420X-1, M420X-2, M420X-3, MI420I, G465R
SLC22A2	6‡	WT, P54S, M165V, S270A, R400C, K432Q
SLC22A6	2‡	WT, R50H
SLCO1B1	11	(*1A,*4,*6,*7,*8), (*1B;*14), *2, *3, *5, *9, *10, *11, *12, *13, (*15;*16;*17)
SLCO1B3	3‡	WT, S112A, M233I
SLCO2B1	2‡	WT, S464F
SULT1A1	4 plus CNV	(*1;*5;*6), (*2;*7), *3, *4
TPMT	7	*1, *2, (*3A;*3D), *3B, *3C, *4, *8
UGT1A1	7	*1, *6A, *6B, *7, *27, *29, *60
UGT2B15	2‡	WT, Y85D
UGT2B17	CNV only	
UGT2B7	2	*1, *2
VKORC1	4	*1, *2, *3, *4

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