iPLEX® CYP2C19 Panel

Investigate and Confirm Pharmacogenetic Biomarkers in *CYP2C19*

The iPLEX® CYP2C19 Panel, for use on the MassARRAY® System, is a a set of 31 pre-designed SNP assays for use in the screening of polymorphisms in *CYP2C19*.

- ✓ Obtain biologically relevant data covering most of the known *CYP2C19* haplotypes.
- ✓ Use as little as 20 ng of DNA per sample.
- ✓ Streamline workflows with a universal PCR primer pool.

Agena Bioscience also offers the iPLEX PGx Pro Panel, covering 36 key genes known to influence drug metabolism, as well as panels for in-depth analysis of *CYP2C9/VKORC1* and *CYP2D6*.

Visit ***www.agenabioscience.com*** for more information.

CYP2C19 HAPLOTYPES INCLUDED IN THE PANEL

*1A	*5B	*16
*1B	*6	*17
*1C	*7	*18
*2	*8	*19
*2B	*9	*22
*3A	*10	*23
*3B (also called *20)	*11	*24
	*12	*25
*4A	*13	*26
*4B	*14	*27
*5A	*15	*28

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

51-20033R2.0 0317

Agena BIOSCIENCE

THE MASSARRAY WORKFLOW

Each sample is subjected to PCR amplification and primer extension with the iPLEX CYP2C19 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 iPLEX CYP2C19 Panel contains multiplexed assays in 2 wells, using 10 ng of input DNA per well. The panel can be run in 96-well format (48 samples per plate) or 384-well format (192 samples per plate). Forty-eight to 1,536 samples can be processed per day, providing flexibility in sample throughput and batching requirements.

PANEL COMPONENTS

AMPLIFY	PCR Enzyme PCR Accessory Set CYP2C19 PCR Primers
EXTEND	iPLEX® Pro Reagent Set CYP2C19 Extend Primers
DETECT	SpectroCHIP® Array and Clean Resin
ANALYZE	MassARRAY® Analysis Software

CYP2C19 HAPLOTYPE NOMENCLATURE

HAPLOTYPE	NUCLEOTIDE CHANGES	AMINO ACID CHANGE	dbSNP IDs
***1A**	None	None	
***1B**	99C>T; 991A>G	I331V	rs17885098; rs3758581
***1C**	991A>G	I331V	rs3758581
***2** (includes *2A and *2C)	99C>T; 681G>A; 991A>G, 991A>G	Splicing defect; I331V	rs17885098; rs4244285; rs3758581
***2B**	99C>T; 276G>C; 681G>A;	E92D; splicing defect; I331V	rs17885098; rs17878459; rs4244285; rs3758581
***3A**	636G>A; 991A>G	W212X; I331V	rs4986893; rs3758581
***3B** (also called *20)	636G>A; 991A>G; 1078G>A	W212X; D360N; I331V	rs4986893; rs3758581; rs144036596
***4A**	1A>G; 99C>T, 991A>G	GTG initiation codon; I331V	rs28399504; rs17885098; rs3758581
***4B**	-806C>T; 1A>G; 99C>T, 991A>G	GTG initiation codon; I331V	rs12248560; rs28399504; rs17885098; rs3758581
***5A**	1297C>T	R433W	rs56337013
***5B**	99C>T; 991A>G; 1297C>T	I331V; R433W	rs17885098; rs3758581; rs56337013
***6**	99C>T; 395G>A; 991A>G	R132Q; I331V	rs17885098; rs72552267; rs3758581
***7**	19294T>A	Splicing defect	rs72558186
***8**	358T>C	W120R	rs41291556
***9**	99C>T; 431G>A; 991A>G	R144H; I331V	rs17885098; rs17884712; rs3758581
***10**	99C>T; 680C>T; 991A>G	P227L; I331V	rs17885098; rs6413438; rs3758581
***11**	99C>T; 449G>A; 991A>G	R150H; I331V	rs17885098; rs58973490; rs3758581
***12**	99C>T; 991A>G; 1473A>C	I331V; X491C; 26 extra aa	rs17885098; rs3758581; rs55640102
***13**	991A>G; 1228C>T	I331V; R410C	rs3758581; rs17879685
***14**	50T>C; 99C>T; 991A>G	L17P; I331V	rs17885098; rs3758581
***15**	55A>C; 991A>G	I19L; I331V	rs17882687; rs3758581
***16**	1324C>T	R442C	C19C1324T
***17**	-806C>T; 99C>T; 991A>G	I331V	rs17885098; rs17885098; rs3758581
***18**	99C>T; 986G>A; 991A>G	R329H; I331V	rs17885098; rs138142612; rs3758581
***19**	99C>T; 151A>G; 991A>G	S51G; I331V	rs17885098; C19A151G; rs3758581
***20**	See CYP2C19*3B		
***22**	557G>C; 991A>G	R186P; I331V	rs140278421; rs3758581
***23**	99C>T; 271G>C; 991A>G	G91R; I331V	rs17885098; rs118203756; rs3758581
***24**	99C>T; 991A>G; 1004G>A; 1197A>G	I331V; R335Q	rs17885098; rs3758581; rs118203757; C19A1197G
***25**	99C>T; 991A>G; 1344C>G	I331V; F448L	rs17885098; rs3758581; rs118203759
***26**	99C>T; 766G>A; 991A>G	D256N; I331V	rs17885098; C19G766A; rs3758581
***27**	-1041G>A; 991A>G	I331V	rs7902257; rs3758581
***28**	55A>C; 991A>G	I19L; I331V; V374I	rs17882687; rs3758581
(Preliminary)	-1418C>T		rs3814637
(Preliminary)	-2720T>C		rs77850210

If no rs number available, polymorphism is represented by base and base change. E.g., C09C89T is base 89 C>T for CYP2C9. Nomenclature is based on http://www.cypalleles.ki.se/cyp2c9.htm

Only those SNPs that are tested are used for determining haplotype - all other sequence information is assumed to be wild type.

Rare haplotypes may only be validated for wild type allele.

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

Agena BIOSCIENCE