illumina®

Human Infinium™ DNA microarrays

Summary of Illumina arrays for human genotyping, epigenetics, and cytogenetics research

Fixed Infinium genotyping arrays

Array name	Description	No. of markers	Kit size (No. of samples)	No. of samples per BeadChip
Infinium Global Screening Array-24	• Powerful, economical array for population-scale genomic studies • Imputation-optimized backbone enables identification of new associations and clinical research content to screen for known and putative associations • Enhanced coverage of pharmacogenonomics, ClinVar, HLA, and ACMG variants (updated March, 2018)	~665K	48	24
			288	24
			1152	24
Infinium Global Screening Array-48 (EX)	• High-throughput array for population studies, variant screening, and precision medicine research • Infinium EX chemistry provides accurate, high-density assays and delivers results in under three days	~650K	48	48
			96	48
			1152	48
Infinium Global Diversity Array-8	• Powerful cost-effective array with up-to-date clinical research variants for disease and pharmacogenetics studies • Robust genome-wide scaffold contains variant information from CAAPA and PAGE, including over 1,000 whole-genome sequences from African ancestry and populations across the Americas	~1.8M	16	8
			48	8
			96	8
			384	8
Infinium Global Clinical Research Array-24 (EX)	• High-density BeadChip designed for clinical research applications • Streamlined Infinium EX workflow delivers fast turnaround times	~1.2M	48	24
			288	24
			1152	24
Infinium Asian Screening Array-24	• Versatile array that combines genome-wide coverage of East Asian populations with relevant clinical research content for genotyping studies • Comprehensive content is built using a 9K whole-genome East Asian reference panel, with updated markers from ClinVar and PharmGKB, and coverage of populations underrepresented in the 1KGP	~660K	48	24
			288	24
			1152	24
Infinium Chinese Genotyping Array-24	• Scalable, cost-effective array for variant screening and precision medicine research in the Chinese population. • Expert-designed content with input from key scientific leaders in China • Genome-wide backbones from the Infinium Global Screening Array-24 v3.0 and the Infinium Asian Screening Array-24 v1.0 plus up-to-date clinical research variants for complex disease studies, pharmacogenomics, and more	~648K	48	24
			288	24
			1152	24

1KGP, 1000 Genomes Project; ACMG, American College of Medical Genetics and Genomics; CAAPA, Consortium on Asthma among African-ancestry Populations in the Americas; HLA, human leukocyte antigen; LD, linkage disequilibrium; OMIM, Online Mendelian inheritance in man; PAGE, Population Architechture using Genomics and Epidemiology; SNP, single nucleotide polymorphism.

Fixed Infinium genotyping arrays, continued				
Array name	**Description**	**No. of markers**	**Kit size (No. of samples)**	**No. of samples per BeadChip**
Infinium Japanese Screening Array-24	• Scalable, cost-effective array for variant screening and precision medicine research in Japanese populations • High-value content includes Infinium Asian Screening Array-24 v1.0 and new tag SNPs based on Japanese whole-genome sequencing data	~736K	48	24
			288	24
			1152	24
Infinium Global Diversity Array with Enhanced PGx Content-8	• Comprehensive genotyping array supporting PGx research, PRS development, ancestry determination, and genetic disease research • High-value content includes 44,000+ ADME markers across 2,000+ genes, with exceptional coverage of CPIC priority variants and high-impact PGx genes like *CYP2D6*, *CYP2B6*, and *TPMT*, enabled by an improved workflow for pseudogene disambiguation	~1.9M	48	8
			384	8
Infinium Global Diversity Array with Carrier Screening Content-8	• Comprehensive, panethnic array for expanded carrier screening, featuring 45K carrier screening markers on a 1.8M genome-wide backbone for broad coverage of inherited conditions • High-value content can be combined with enhanced PGx content, providing a single platform for both carrier screening and PGx testing	~1.9M	16	8
			48	8
			96	8
			384	8
Infinium Global Diversity Array with Polygenic Risk Score Content-8	• High-performance microarray with a flexible, scalable workflow for PRS studies, featuring 160K updated markers for accurate PRS determination • High-value content is built on the Infinium Global Diversity Array, with optimal data analysis through the Predict software module for a complete genotype-to-risk solution in polygenic disease research	~2.0M	16	8
			48	8
			96	8
			384	8
Infinium Global Screening Array with Enhanced PGx-48 (EX)	• High-throughput genotyping array for PGx and precision medicine research • High-value content features ~646K markers on a genome-wide backbone, including ~41K supplemental markers for advanced PGx research	~646K	48	48
			96	48
			1152	48
Infinium Global Clinical Research Array with Enhanced PGx-24 (EX)	• High-throughput genotyping array for PGx studies and clinical research applications • Comprehensive coverage includes ~1.2M annotated variants from public databases and ~35K markers supporting advanced PGx research • Automated workflow supports medium- and high-throughput project needs	~1.2M	24	24
			96	24
			1152	24

ADME, absorption, distribution, and excretion; CPIC, Clinical Pharmacogenetics Implementation Consortium; PGx, pharmacogenomics; PRS, polygenic risk score; SNP, single nucleotide polymorphism.

Fixed Infinium genotyping arrays, continued				
Array name	**Description**	**No. of markers**	**Kit size (No. of samples)**	**No. of samples per BeadChip**
Infinium OmniExpress-24	• High-density array providing high LD coverage of common SNP variation with high-throughput capabilities of thousands of samples per week	~710K	48	24
			288	24
			1152	24
Infinium QC Array-24	• High-throughput, cost-effective genotyping array for sample quality control and tracking • Ideal solution for biobanking and high-throughput genomics • Robust fingerprinting resolution and high-value content for sample stratification upstream from NGS or other processes	~16K	48	24
			96	24
			1152	24

LD, linkage disequilibrium; NGS, next-generation sequencing; SNP, single nucleotide polymorphism.

Semi-custom Infinium genotyping arrays[a]				
Array name	**Description**	**Add-on capacity[b]**	**Kit size (No. of samples)**	**No. of samples per BeadChip**
Infinium Global Screening Array-24+	• High-value content from the Infinium Global Screening Array-24 with the ability to add on custom content	100K	48	24
			288	24
			1152	24
Infinium Global Screening Array-48+ (EX)	• High-value content from the Infinium Global Screening Array-48 (EX) with the ability to add on custom content	50K	48	48
			96	48
			1152	48
Infinium Global Diversity Array-8+	• High-value content from the Infinium Global Diversity Array-8 with the ability to add on custom content	175K	16	8
			48	8
			96	8
			384	8

a. New semi-custom synthesis array projects must have a minimum of 1152 samples.
b. Number of bead types.

Semi-custom Infinium genotyping arrays, continued[a]				
Array name	Description	Add-on capacity[b]	Kit size (No. of samples)	No. of samples per BeadChip
Infinium Global Cinical Research Array-24+ (EX)	• High-value content from the Infinium Global Clinical Research Array-24 (EX) with the ability to add on custom content	50K	48	24
			288	24
			1152	24
Infinium Asian Screening Array-24+	• High-value content from the Infinium Asian Screening Array-24 with the ability to add on custom content	50K	48	24
			288	24
			1152	24
Infinium Chinese Genotyping Array-24+	• High-value content from the Infinium Chinese Genotyping Array-24 with the ability to add on custom content	50K	48	24
			288	24
			1152	24
			4608	24
			23040	24
Infinium Japanese Screening Array-24+	• High-value content from the Infinium Japanese Screening Array-24 with the ability to add on custom content	50K	48	24
			288	24
			1152	24
Infinium OmniExpress-24+	• High-value content from the Infinium OmniExpress-24 BeadChip with the ability to add on custom content	50K	48	24
			288	24
			1152	24

a. New semi-custom synthesis array projects must have a minimum of 1152 samples.
b. Number of bead types.

Epigenetic arrays				
Array name	**Description**	**No. of markers**	**Kit size (No. of samples)**	**No. of samples per BeadChip**
Infinium MethylationEPICv2.0	• Genome-wide methylation discovery tool • Ideal solution for genetic and rare disease research, cancer research, and tumor molecular classification studies	~935K	16	8
			32	8
			96	8
Infinium Methylation Screening Array-48	• Cost-effective and scalable screening tool for epidemiological studies • Ideal solution for large-scale epigenome-wide association studies and biobank projects	~269K	48	48
			96	48
			1152	48

Semi-custom epigenetic arrays				
Array name	**Description**	**Add-on capacity[a]**	**Kit size (No. of samples)**	**No. of samples per BeadChip**
Infinium MethylationEPICv2.0+	• Genome-wide methylation discovery tool providing enhanced flexibility for unique research projects	10K	16	8
			32	8
			96	8
Infinium Methylation Screening Array-48+	• Scalable genome-wide methylation screening tool providing enhanced flexibility for unique research projects	3–100K	48	48
			96	48
			1152	48
Infinium HTS iSelect Methyl Custom BeadChip	• Versatile option for creating custom high-throughput content for a wide range of applications in epigenetics research	100K	48	24

a. Number of bead types.

Cytogenetics and IVF arrays				
Array name	**Description**	**No. of markers**	**Kit size (No. of samples)**	**No. of samples per BeadChip**
Infinium Global Diversity Array with Cytogenetics Content-8	• Scalable, cost-effective array with ~1.8M markers, including 160K supplemental markers targeting > 4.8K tiered genes for optimal performance in CNV analysis • Expert-selected content with input from a cytogenetics research consortium, with probes strategically placed near exons for enhanced performance in CNV analysis	~1.8M	16	8
			48	8
			96	8
			384	8
Infinium Global Screening Array with Cytogenetics Content-24	• Versatile array with ~700K markers, including 80K supplemental markers targeting > 4.8K tiered genes and regions with known disease associations • Expert-selected content with input from a cytogenetics research consortium, featuring pathogenic and likely pathogenic genes defined by ClinGen, and an enhanced backbone	~700K	16	24
			48	24
			96	24
			384	24
Infinium CytoSNP-850K	• First SNP-based human microarray incorporating the latest input from the ICCG and CGC for comprehensive cytogenomics studies • Enhanced SNP coverage, enabling copy number calls as small as 10 kb in regions associated with genetic disease	~850K	8	8
			16	8
			48	8
			96	8

CGC, Cancer Genomics Consortium; ClinGen, Clinical Genome Resource; CNV, copy number variation; ICCG, International Clinical Cardiovascular Genomics; SNP, single nucleotide polymorphism.

Learn more →

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