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Illumina FastTrack® Microarray Services

Experience personalized service, guaranteed turnaround times, and industry-leading data quality.

Highlights

Infinium® Service Projects

- More than 700,000 samples processed with 98% sample success rate at 99.6% average call rate

Methylation Service Projects

- More than 5,000 samples processed with 95% sample success rate at 99.5% average call rate

"Overall, our experience working with Illumina has been simply outstanding. The scientists and service staff of this organization are highly talented and committed individuals... The staff of Illumina went well beyond the normal service requirement to maximize information yield on these samples."

— PETER K. GREGERSON, M.D., Head of the Robert S. Boas Center for Genomics and Human Genetics

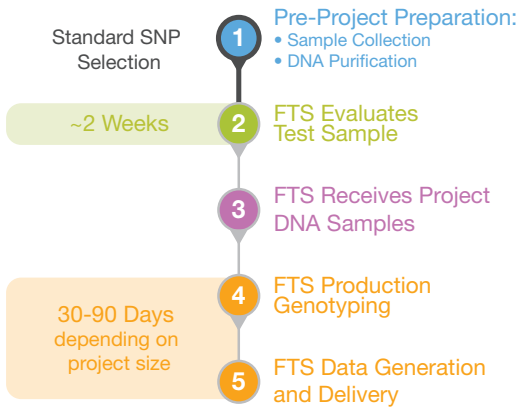
Using cutting-edge microarray technology, Illumina FastTrack Services (FTS) has consistently provided on-time, reliable genotyping and microarray services to academic, pharmaceutical, biorepository, and consumer genomics customers since 2001. Working in close collaboration with its customers, FTS generates the raw data for a broad range of research topics including cancer genomics, genetic disease, epigenetics, agrigenomics, and more. Illumina FastTrack Service allows customers to access cutting-edge Illumina products without the need to set up a dedicated genotyping laboratory. FTS customers can conduct whole-genome association studies, DNA copy number studies, linkage analysis, fine mapping, and whole genome DNA methylation studies—all in a cost-effective and timely manner.

Illumina FastTrack Microarray Service offers a seamless transition from whole genome discovery projects to more focused, follow-up projects with iSelect® Custom Genotyping. Similarly, Illumina FastTrack Sequencing Services are available for a base-by-base view of your region of interest. In addition to these benefits, Illumina Microarray Services provides project management, study design assistance, and a professional, cooperative approach to ensure the success of your project.

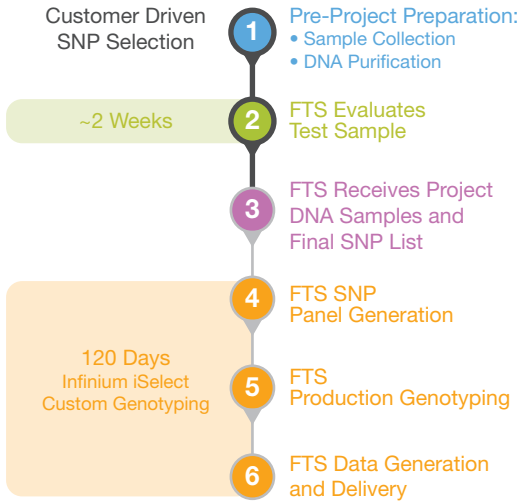
Personalized Service With Dedicated Experts

- An expert project manager—with a PhD in molecular genetics—assigned to each project
- Demonstrated technical expertise with a 98% sample success rate
- Over 1 million samples genotyped since program inception, spanning over 600 projects
- Expertise with large data sets—over 35 billion genotypes delivered for a single project
- Close collaboration with customers and within the FTS team to ensure the best customer service and deployment of cutting-edge Illumina technology
- Streamlined custom SNP selection from an up-to-date database of > 5 million validated SNP markers

Standard Panel Genotyping Project Timeline



Custom Panel Genotyping Project Timeline



Reliable and Fast Process

- Guaranteed delivery date, with turnaround times of 30–90 days
- Broad sample size range from 96 to thousands of samples
- World-class fully automated Illumina Microarray Lab environment capable of generating over 1 billion genotypes per day
- Fully integrated Laboratory Information Management System (LIMS) with positive-flow tracking, from sample input to data output and analysis
- Barcoded plates sent to customers to ensure accurate sample tracking
- All project data sets must pass rigorous quality control standards
- All materials and samples shipped with Illumina-provided shipping labels including return UPS labels
- Each project includes a seat license for GenomeStudio® for final data analysis and data visualization
- Final annotated SNP lists specified with expected assay conversion rates

Industry-Leading Data Quality

- Consistently exceptional results from quality-driven processes and professional expertise
- Quality scores are assigned to every sample and every SNP locus
- Illumina control samples included on every sample plate for extensive real-time QC and data review in LIMS environment
- Samples that do not meet performance standards at first attempt, will be rerun at no charge
- Low sample input requirements

Comprehensive and Flexible Study Options

- Infinium genotyping and methylation microarrays provide the largest and most flexible portfolio in the industry
- Standard and custom content available
- Whole-genome and fine mapping content available
- Scalable assay levels—from more than 3,000 custom SNPs to 5 million standard SNPs per microarray
- Wide sample size range—from 96 to several thousand
- Tag SNP selection available for any combination of the four HapMap populations
- All organisms supported
- FTS works in close collaboration with FastTrack Sequencing Services (every sequencing sample is genotyped for sample validation). As a result, Illumina FTS has the infrastructure and expertise to provides a seamless transition from genotyping studies to sequencing applications and vice versa.

Summary

Take advantage of the full menu of Illumina FastTrack Microarray Services. Our highly experienced FastTrack Service project managers are committed to working collaboratively with you from beginning to end, to ensure the highest-quality data and fastest turnaround time. Enjoy the benefits of cutting-edge technologies and personalized service from the microarray market leader.

Infinium Whole-Genome Genotyping Past Performance

Based On > 500 Projects and 500 Billion Genotypes*

Infinium Service Projects	Average†
Sample Success Rate	98.00%
Locus Success Rate	> 99.00%§
Call Rate	99.60%
Reproducibility	99.99%
Heritability (Trios)	99.98%

* Based on all contracts between 2003–present

† Performance may vary depending on DNA sample quality and SNP selection

§ Success rate for standard products

Minimum Microarray Turnaround Times Per Service Offering

Project Sample Size*	< 2,000 samples	< 10,000 samples		> 10,000 samples
Infinium Panels	60 days	90 days		Consult Sales Representative
iSelect and Standard Plus	60 days	120 days from SNP list submission	90 days from sample submission	

Project Sample Size*	< 400 samples	< 2,000 samples	> 2,000 samples
DNA Methylation	45 days	60 days	Consult Sales Representative

*Turnaround times may vary depending on receipt of a purchase order, loci selection (if applicable), and acceptance of sample, whichever occurs last.

Ordering Information

Illumina FastTrack Microarray Services For Whole-Genome Genotyping Projects

Content		Human CytoSNP-12	Human Exome	Human Core	Human OmniExpress	Human Omni2.5	Human Omni5
Base Markers		300,000	-	250,421	719,665	2,379,855	4,301,332
Exome Markers		-	244,770	244,770	244,770	244,770	244,770
Custom SNPs		-	-	300K	50K	≤ 200K	≤ 500K
Custom SNPs (Exome +)		-	≤ 200K	≤ 100K	≤ 30K	-	≤ 250K
Samples Per Array		12	12	24	24 (Standard) 8 (+Exome)	8	4
Required DNA Concentration Per Sample (ng/µl)	Midi Plates	50	50	50	50	50	50
	TCY Plates	50	50	50	50	50	50
Required DNA Per Sample (µg)	Midi Plates	1.75	1.75	1.75	1.75	1.75	1.75
	TCY Plates	1	1	1	1	1	1
Required Volume Per Sample (µl)	Midi Plates	35	35	35	35	35	35
	TCY Plates	20	20	20	20	20	20
Link to Product Page		-	Human Exome	Human Core	Human OmniExpress	Human Omni2.5	Human Omni5

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Ordering Information

Illumina FastTrack Microarray Services For Custom Panel Projects

Content		Infinium iSelect
Custom Markers (SNPs or CNVs)		3,072 – 700k
Required DNA Concentration Per Sample (ng/µl)	Midi Plates	50
	TCY Plates	50
Required DNA Per Sample (µg)	Midi Plates	1.75
	TCY Plates	1
Required Volume Per Sample (µl)	Midi Plates	35
	TCY Plates	20
Link to Product Page		Infinium iSelect

Illumina FastTrack Microarray Services For Methylation Projects

Content		Infinium HumanMethylation450
Total Markers		~485,000 methylation sites
Samples Per Array		24
Required DNA Concentration Per Sample (ng/µl)	Midi Plates	70
	TCY Plates	70
Required DNA Per Sample (µg)	Midi Plates	2.8
	TCY Plates	2.1
Required Volume Per Sample (µl)	Midi Plates	40
	TCY Plates	30
Link to Product Page		Infinium HumanMethylation450

Illumina FastTrack Microarray Services For Agrigenomics Projects

Content		BovineHD	BovineSNP50	BovineLD	PorcineSNP60	OvineSNP50	MaizeSNP50	CanineHD
Total Markers		777,962	54,609	6,912	64,232	54,241	56,110	172,155
Samples Per Array		8	24	24	24	24	24	12
Required DNA Concentration Per Sample (ng/µl)	Midi Plates	50	50	50	50	50	50	50
	TCY Plates	50	50	50	50	50	50	50
Required DNA Per Sample (µg)	Midi Plates	1.75	1.75	1.75	1.75	1.75	1.75	1.75
	TCY Plates	1	1	1	1	1	1	1
Required Volume Per Sample (µl)	Midi Plates	35	35	35	35	35	35	35
	TCY Plates	20	20	20	20	20	20	20
Link to Product Page		BovineHD	BovineSNP50	-	PorcineSNP60	OvineSNP50	MaizeSNP50	CanineHD

Learn More

For Illumina FastTrack Services, contact Customer Service at (858) 202–4566 or visit www.Illumina.com/services.ilmn.

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