PRODUCT DATA SHEET

Human Whole Genome Sequencing

Deep experience in producing WGS data
>150,000 Whole Genomes to date

Clinical-Grade Quality Management Systems

Workflows and Deliverables defined by the Broad Institute research community

PRODUCT OVERVIEW

Leveraging over twenty years of experience in human whole genome sequencing, the Broad Institute powers the world's largest WGS research projects, spanning from: The Human Genome Project, to the 1000 Genomes Project, to NHLBI TOPMed and more. Our operation is built to scale, utilizing the most cutting edge sequencing technologies, providing advantages in cost and turn-around-time with best-in-class sample qualification and bioinformatics. The WGS workflows and data deliverables are designed in hand with our academic community, allowing the Broad Institute to provide global researchers the tools to recognize the promise of human whole genome sequencing.

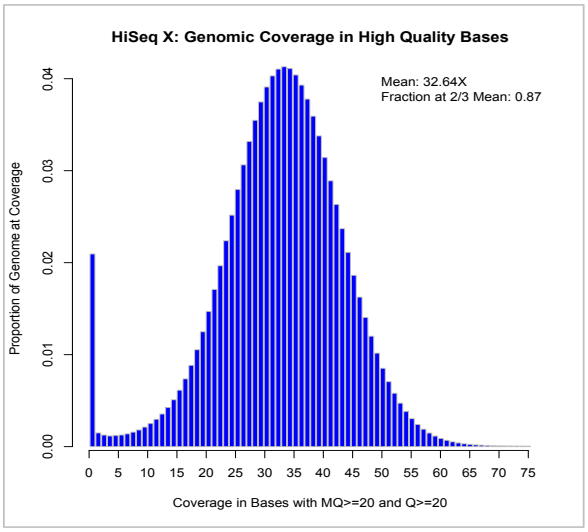
WHAT'S INCLUDED

- Sample Receipt and Initial QC
- Sample Fidelity QC (96 SNP fingerprinting)
- Library Construction and QC
- 2x150bp Paired Sequencing: 30x, 60x
- De-multiplexing, aggregation, and alignment (Bwa-Mem)
- Data Delivery

DATA DELIVERABLE

- Data accessed via secure online digital transfer
- De-Multiplexed, aggregated Picard BAM file with summary metrics

COVERAGE ACROSS THE GENOME



Genome-wide Coverage Distribution of representative sample sequenced to mean coverage of ~30X

WHOLE GENOME OFFERINGS

Product	Utility	DNA input	Compatible Extractions	Library Construction	Read Length	Coverage Deliverable
Standard Coverage Human WGS	Medical & population genetics, disease research, and evolution studies. Limited input material	100ng	FFPE*, fresh frozen tissue, blood, saliva*, cell pellets, or buffy coats	PCR library amplification	2 x 150bp	30X
Deep Coverage Human WGS	Rare disease population studies, and Case/proband for case-control tumor/normal & trio/somatic analysis Limited input material	100ng	FFPE*, fresh frozen tissue, blood, saliva*, cell pellets, or buffy coats	PCR library amplification	2 x 150bp	60X
Standard Coverage PCR-Free WGS	Medical & population genetics, disease research, and evolution studies.	350ng	Fresh frozen tissue, blood, saliva*, cell pellets, or buffy coats	PCR-Free	2 x 150bp	30X
Deep Coverage PCR-Free WGS	Rare disease population studies, and Case/proband for case-control tumor/normal & trio/somatic analysis	350ng	Fresh frozen tissue, blood, saliva*, cell pellets, or buffy coats	PCR-Free	2 x 150bp	60X
Common Disease WGS	Screening and large population studies	350ng	Fresh frozen tissue, blood, saliva*, cell pellets, or buffy coats	PCR-Free	2 x 150bp	variable

*special at risk considerations when working with these material types

BROAD INSTITUTE

GENOMIC SERVICES

FOR MORE INFORMATION

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