Geneture
仁初医疗

Geneture GenoPro Gene Sequencer

Geneture GenoPro Gene Sequencer employs fluorescence sequencing technology and algorithms based on DNA amplification on the chip surface. It identifies and processes the optical signals of bases to form imaging information. After analyzing the imaging information, the corresponding gene sequence data is ultimately obtained. The device is characterized by good repeatability, high accuracy, fast speed, and stable results. Geneture GenoPro Gene Sequencer is compatible with sequencing chips of various throughputs and supports multiple read lengths, meeting the needs of different application fields.

Key Features

Fast

Run Time

3.5hr

Accuracy

sequencing results accuracy

>99.9%

Flexibility

Open platform, equipped with various sequencing modes, suitable for various application needs.

Stability

Strict control, consistent quality, reliable sequencing results.

Specifications

Chip Type	Reads	Read Length	Throughput	Data Quality	Sequencing Time
Medium Throughput	220M	50bp	11G	Q30>90%	~3.5h
		75bp	16G	Q30>90%	~4.5h
		300bp	66G	Q30>85%	~22h
High Throughput	660M	50bp	33G	Q30>90%	~4.5h
		75bp	50G	Q30>90%	~6h
		300bp	200G	Q30>85%	~24h

*The sequencing time is for dual index (8+8);
*The time mentioned above is the theoretical sequencing time;
*Sequencing time and data quality may fluctuate due to the different libraries used.

Methods	Applications	Data Volume / Sample	Read Length	220M Samples / Run	660M Samples / Run
Low-pass Whole Genome Sequencing	NIPT	~5 M reads	SE 50	44	132
Targeted Sequencing (Capture / Multiplex Amplification)	Targeted Pathogen Sequencing (tNGS)	0.5 M ~ 1 M reads	SE 50	220-440	660-1320
	Small Panel for Tumor Companion Diagnostics	~1 Gb	PE 150	66	198
	Small Panel for Genetic Diseases (Deafness, Metabolism)	3 ~ 5 Gb	PE 150	13.2-22	39.6-66
	16S Sequencing	~0.5 M reads	PE 300	440	1320
	Forensic DNA Identification	~0.5 M reads	SE 400	440	1320
Small Genomes Sequencing (Tuberculosis, Tnfluenza, etc.)	Bacterial / Virus	~1 Gb	PE 150	66	198
Methylation Sequencing	Pan-cancer Early Screening	~1 Gb	PE 150	66	198

*The number of samples is estimated after careful consideration of library pooling bias and is for reference only.

Data Demostrations

The PE150 WES standard article library test results in different sequencing platforms:

Sample Type	HG001		HG002		HG003		HG004		HG005	
Sequencing Platform	Geneture GenoPro	Novaseq 6000	Geneture GenoPro	Novaseq 6000	Geneture GenoPro	Novaseq 6000	Geneture GenoPro	Novaseq 6000	Geneture GenoPro	Novaseq 6000
RawQ30%	93.9039	94.92	93.8019	94.46	93.9166	94.74	93.669	94.49	93.9675	94.76
Mapping%	99.83	99.87	99.84	99.89	99.83	99.87	99.85	99.87	99.84	99.87
Strict Mapping Proportion%	97.97	97.29	98.08	97.6	98.38	97.87	98.21	97.61	98.27	97.78
Coverage >10X	99.67	99.67	99.87	99.86	99.87	99.77	99.68	99.67	99.86	99.86
Target region fold-80	1.576	1.6	1.602	1.648	1.598	1.633	1.57	1.6	1.592	1.615
Uniformity of Target Region Coverage	0.99	0.99	0.99	0.99	0.9904	0.99	0.99	0.99	0.99	0.99
SNP.F1_score	0.9932	0.9938	0.9901	0.9910	0.9911	0.9913	0.9904	0.9915	0.9903	0.9915
INDEL.F1Score	0.9799	0.9823	0.9751	0.9760	0.9606	0.9706	0.9836	0.9901	0.9721	0.9779

Sequencing Results:Geneture GenoPro exhibits high sensitivity and accuracy in detecting variations (SNPs and INDELs) in the exome genome.

Tech Innovations

R&D capabilities

New Optical System

100% larger field of view and 50% less imaging time

New Chips

Robustness and better reaction effciency

New Enzymes

Read length up to SE 400 with better quality

New Fluorescent Dye

Proprietary dyes systems to optimized for better imaging performance

New Chemistry

In fast sequencing mode, the SE 50 + 8 + 8 test can be completed in as fast as 3.5 hours

Geneture GenoPro Instrument Specifications

Parameter		Specifications
Dimensions		825 mm(W) x 687 mm(D) x 788 mm(H)
Weigh		120Kg
Power Requirements	Input voltage	AC 220V±22V
	Frequency	50Hz±1Hz
	Power	750VA
Operating Environment	Ambient Temperature	19°C to 25°C
	Altitude	Not exceeding 3000 m
	Humidity, RH (Non-condensing state)	10% to 85% (Nocondensation)
	Air Pressure	700hPa to 1060hPa
Computer Configuration	CPU	Main frequency above 2.3GHz
	Memory	128GB or more
	Solid State Drive	480GB + 4TB
	Monitor	Resolution of 1920×1080 or higher
	Operating System	Compatible with Windows 10 or later versions

Multiple Applications

About Geneture

Empower and Cooperate

Geneture focuses on the field of clinical diagnostics, providing customers with mature solutions such as NIPT and NGS for oncology, as well as the products included within these solutions.

Geneture holds 3 authorized invention patents, 26 utility model patents, 3 appearance patents, 10 software copyrights, 11 CE certifications, and 3 inventions under review.

Company Qualifications

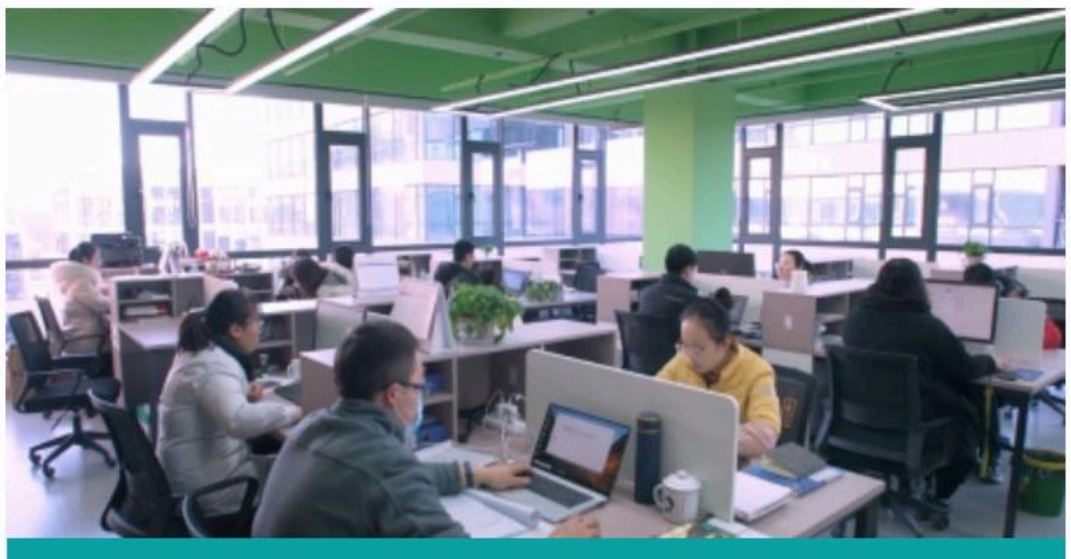
CE certification

ISO 9001

ISO 13485

Company Environment

Assembly Line



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