

Salus Pro Genetic Sequencer



Salus Pro Medium Throughput NGS Platform

Salus BioMed is dedicated to delivering superior next-generation sequencing (NGS) platforms to empower users across research and clinical applications. The Salus Pro genetic sequencer is a flexible, fast, accurate, cost effective, and easy-to-use benchtop sequencer based on the principle of sequencing-by-synthesis (SBS) technology. As well as integrating a number of original technologies such as advanced optics, rapid chemistry systems, high-density chip design, the Salus Pro sequencer contains two sequencing units and supports multiple chip sizes, covering from low, medium and high throughput to meet the needs of different clinical and scientific research scenarios.

Key Features

80 M – 2000 M reads / run
Throughput up to
600 Gb per run

Run time
4.8 hr – 45hr

Read length
SE 50 – PE 250

Specifications

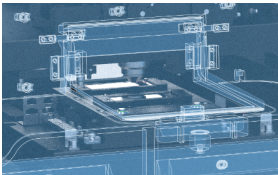
The Salus Pro offers multiple chip sizes (80 M, 150 M, 250 M, 500 M, 1000 M, etc.) and supports various sequencing read lengths (SE 50, SE 75, SE 100, PE 75, PE 100, PE 150, PE 250, SE 400, etc.), catering to diverse application needs.

| Throughput Read Length | 80 M | 150 M | 250 M | 500 M | 1000 M | Q30 |
|---------------------------|-----------------|-----------------|------------------|-------------------|----------------|------|
| SE 50 | 4.0 Gb / 4.8 hr | 7.5 Gb / 6 hr | 12.5 Gb / 6.6 hr | 25.0 Gb / 10.7 hr | / | ≥90% |
| SE 75 | 6.0 Gb / 6 hr | 11.2 Gb / 7 hr | 18.7 Gb / 7.7 hr | 37.5 Gb / 13 hr | / | ≥90% |
| SE 100 | 8.0 Gb / 7.2 hr | 15.0 Gb / 8 hr | 25.0 Gb / 9.2 hr | 50.0 Gb / 17 hr | / | ≥90% |
| PE 75 | / | / | / | 75.0 Gb / 24 hr | 150 Gb / 26 hr | ≥85% |
| PE 100 | / | / | / | 100 Gb / 31 hr | 200 Gb / 33 hr | ≥85% |
| PE 150 | 24.0 Gb / 20 hr | 45.0 Gb / 24 hr | 75.0 Gb / 25 hr | 150 Gb / 43 hr | 300 Gb / 45 hr | ≥85% |
| PE 250 | 40.0 Gb / 40 hr | 75.0 Gb / 45 hr | / | / | / | ≥80% |
| SE 400 | 32.0 Gb / 30 hr | 60.0 Gb / 33 hr | / | / | / | ≥75% |

*The sequencing time is for dual index (8+8);
*The data throughput mentioned above is for a single chip; Salus Pro can run two chips simultaneously;
*The time mentioned above is the theoretical sequencing time for a single chip;

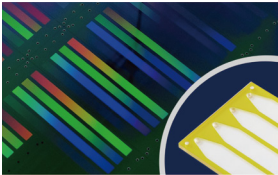
| Sequencing Methods | Key Applications | Data Volume Per Sample | Read Length | 80 M Samples / Run | 150 M Samples / Run | 250 M Samples / Run | 500 M Samples / Run | 1000 M Samples / Run |
|---|-------------------------------------|--|-------------|--------------------|---------------------|---------------------|---------------------|----------------------|
| Lowpass Whole Genome Sequencing | NIPT | 5 M reads | SE 50 | 16 / 32 | 30 / 60 | 50 / 100 | 100 / 200 | - |
| | CNV-seq / PGT-A | 5 M reads | SE 75 | 16 / 32 | 30 / 60 | 50 / 100 | 100 / 200 | - |
| Small Whole-Genome Sequencing | Shotgun Metagenomics | 20 M reads | SE 75 | 4 / 8 | 8 / 16 | 12 / 25 | 25 / 50 | - |
| | Microbe, Virus WGS | 1 Gb | PE 150 | 24 / 48 | 45 / 90 | 75 / 150 | 150 / 300 | 300 / 600 |
| Targeted Resequencing (Target Enrichment / Amplicon Sequencing) | Pathogen Targeted NGS (tNGS) | 1 M reads | SE 50 | 80 / 160 | 150 / 300 | 250 / 500 | 500 / 1000 | - |
| | Small Panel Sequencing | 1 Gb | PE 150 | 24 / 48 | 45 / 90 | 75 / 150 | 150 / 300 | 300 / 600 |
| | Large Panel Sequencing | 10 Gb | PE 150 | 3 / 6 | 5 / 10 | 7 / 15 | 15 / 30 | 30 / 60 |
| | WES | 12 Gb | PE 150 | 2 / 4 | 3 / 7 | 6 / 12 | 12 / 25 | 25 / 50 |
| Methylation Sequencing | Multi-cancer Early Detection | 4 Gb | PE 150 | 6 / 12 | 11 / 22 | 18 / 36 | 36 / 75 | 72 / 150 |
| RNA Sequencing | Bulk RNA-seq | 6 Gb | PE 100 | - | - | - | 16 / 32 | 33 / 66 |
| | Single-Cell RNA Sequencing | 20 – 50k reads/cell (Capture 10000cells) | PE 50 + 100 | - | - | - | 1 / 4 | 2 / 10 |
| Whole Genome Sequencing | Human Whole-Genome Sequencing (30X) | 100 Gb | PE 150 | - | - | - | 1 / 2 | 3 / 6 |

*Up to 2 chips per run



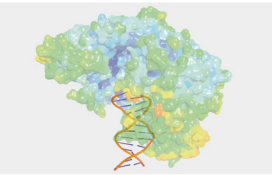
New Optical System

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



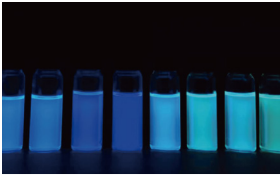
New Chips

Robustness and better reaction efficiency



New Enzymes

Read length up to PE 250 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 4.8 hours

Data Demonstrations

NIPT

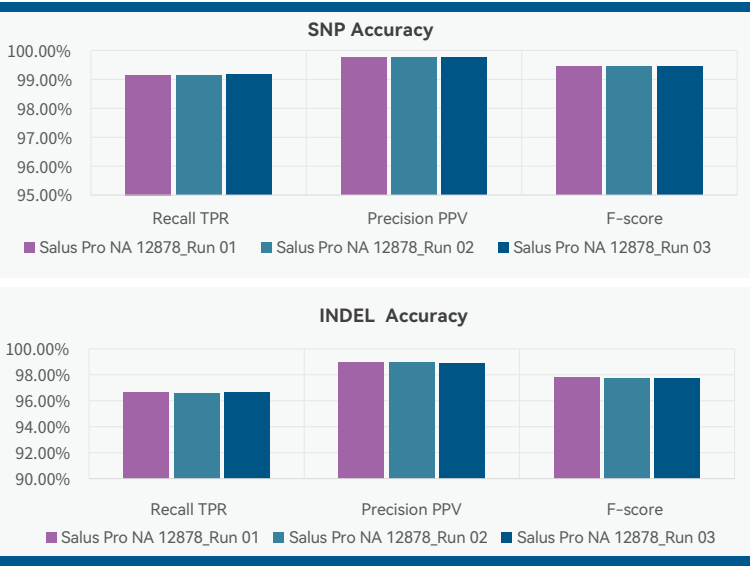
Sample: NIPT Standard Samples

| Sample Code | Reads | Average Coverage (%) | Sequencing Depth | GC-content | Results from Salus Pro | Reference Results | Consistency |
|-------------|----------|----------------------|------------------|------------|------------------------|-------------------|-------------|
| 1 | 12372305 | 14.82 | 0.190 | 41.35 | T13 | T13 | Yes |
| 2 | 11344000 | 13.84 | 0.174 | 41.59 | T13 | T13 | Yes |
| 3 | 12441958 | 14.90 | 0.191 | 41.46 | T13 | T13 | Yes |
| 4 | 11988109 | 14.45 | 0.184 | 41.45 | T18 | T18 | Yes |
| 5 | 12988518 | 15.39 | 0.199 | 41.46 | T18 | T18 | Yes |
| 6 | 12283718 | 14.75 | 0.189 | 41.53 | T18 | T18 | Yes |
| 7 | 13220328 | 15.59 | 0.203 | 41.45 | T21 | T21 | Yes |
| 8 | 12662706 | 15.09 | 0.194 | 41.39 | T21 | T21 | Yes |
| 9 | 13320981 | 15.71 | 0.205 | 41.39 | T21 | T21 | Yes |
| 10 | 7371229 | 9.51 | 0.111 | 41.84 | Negative | Negative | Yes |
| 11 | 6301335 | 8.32 | 0.096 | 42.27 | Negative | Negative | Yes |
| 12 | 7138208 | 9.25 | 0.108 | 41.86 | Negative | Negative | Yes |

WGS

Sample: NA12878 gDNA Samples, 3 Replicates

| Platform | Salus Pro | | |
|---------------------|---------------|---------------|---------------|
| Sample | NA12878_Run01 | NA12878_Run02 | NA12878_Run03 |
| Raw_Q30(%) | 93.80 | 93.43 | 95.20 |
| GC_content(%) | 41.13 | 41.10 | 41.13 |
| Duplication_rate(%) | 5.24 | 5.34 | 5.17 |
| Mapping_rate(%) | 99.95 | 99.95 | 99.94 |
| Mismatch_rate | 3.94E-03 | 3.86E-03 | 3.77E-03 |
| Depth | 32.84 | 33.60 | 33.42 |
| Coverage_1X(%) | 99.01 | 99.01 | 99.03 |
| Coverage_4X(%) | 98.63 | 98.62 | 98.65 |
| Coverage_30X(%) | 61.62 | 60.48 | 63.96 |



Massive Scale of Academic and Industrial Applications

| | | | | | |
|--|---|--|--|---|--|
|  |  |  |  |  |  |
| Healthcare | Public Safety | Research | Breeding | Environment | Consumer |
| <ul style="list-style-type: none"> • Early detection • Genetics • NIPT • PGT-A | <ul style="list-style-type: none"> • Disease control • Customs • FDA/NMPA/EMA • Forensics | <ul style="list-style-type: none"> • Animals • Plants • Biology • Medicine | <ul style="list-style-type: none"> • Agriculture • Livestocks • Aquaculture | <ul style="list-style-type: none"> • mNGS • eDNA | <ul style="list-style-type: none"> • Ancestry • Sports • Wellness |

Salus Pro Instrument Specifications

| Parameter | Specifications | |
|-----------------------------|------------------------------------|-------------------------------------|
| Dimensions | 1265 mm(W) × 700 mm(D) × 675 mm(H) | |
| Weight | 210 KG | |
| Power Requirements | Input voltage | 100V - 240V~ |
| | Frequency | 50 / 60Hz |
| | Power | 1200VA |
| | Fuse | T15AH250V |
| Instrument Configuration | Type | Capacitive |
| | Display | 21.5 inch |
| | Resolution | 1920 × 1080 |
| Operating Environment | Temperature | 19°C - 25°C |
| | Humidity | 20%RH - 80%RH (No condensation) |
| | Altitude | ≤ 2000m |
| Instrument Control Computer | CPU | Intel Xeon® Silver 4216 |
| | Storage | 32 GB DDR4 * 4 |
| | Memory | 10 TB HDD * 4; 512 GB + 2048 GB SSD |
| | OS | Windows 10 x64 |
| Maximum Sound Pressure | 75 dB(A) | |

After-sale Service 400-80-SALUS(72587)

Salus BioMed or its authorized partners offer comprehensive after-sales services, including installation, commissioning, repairs, maintenance, technical support, and any other necessary assistance.

Free installation, commissioning, reagents and consumables for performance validation are available. The company reserved all the rights for final explanation.

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Sequencer Safety

The products comply with IEC6010-2010, IEC6010-2010 / AMD /:2016, IEC61010-2010: 2019, and IEC61010-2-081-2019.

Featuring a rounded shape design, Salus Pro is user-friendly for researchers and operators, significantly reducing the risk of scratching.

Crafted from flame-retardant and environmentally friendly materials, our instruments are designed for easy cleaning and sterilization with alcohol.

Salus BioMed

Empower and Cooperate

Founded in Shenzhen, Salus BioMed specializes in developing high-throughput genetic sequencing platforms and is a world leader in high resolution spatial omics research platforms, serving both research and clinical applications. The company is dedicated to providing a wide range of cutting-edge instruments and solutions to the sequencing and life sciences industry.



Sequencing Lab



Manufacturing Facilities



Enzyme Development



Reagent Production Line