Salus
innovation in life science

# Salus Pro Genetic Sequencer

**Fast** **Accurate** **Flexible**




## Salus Pro Medium Throughput NGS Platform

Salus is dedicated to delivering premium 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. The systems integrates a number of original technologies such as advanced optics, rapid chemistry systems and high-density chip design. The Salus Pro sequencer contains two sequencing units and supports multiple chip sizes including low, medium and high throughput to meet the needs of different clinical and scientific research scenarios.

CE IVDR NMPA

V4.0

# Key Features

| 80 M – 2000 M reads / run<br>Throughput up to | Run time | Read length |
|---|---|---|
| **600 Gb per run** | **4.8 hr – 48 hr** | **50 – 500 cycles** |

# Sequencing Reagent Set Specifications

| 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 / 6.0 hr | 12.5 Gb / 6.6 hr | 25.0 Gb / 8.2 hr | / | ≥90% |
| SE 75 | 6.0 Gb / 6.0 hr | 11.2 Gb / 7.0 hr | 18.7 Gb / 7.7 hr | 37.5 Gb / 11.0 hr | 75.0 Gb / 15.0 hr | ≥90% |
| SE 100 | 8.0 Gb / 7.2 hr | 15.0 Gb / 8.0 hr | 25.0 Gb / 9.2 hr | 50.0 Gb / 13.5 hr | / | ≥90% |
| PE 75 | / | / | / | 75.0 Gb / 20.7 hr | / | ≥85% |
| PE 100 | / | / | / | 100.0 Gb / 26.0 hr | 200.0 Gb / 30.4 hr | ≥85% |
| PE 150 | 24.0 Gb / 19.4 hr | 45.0 Gb / 22.3 hr | 75.0 Gb / 25.0 hr | 150.0 Gb / 36.8 hr | 300.0 Gb / 43.0 hr | ≥85% |
| PE 250 | 40.0 Gb / 40.0 hr | 75.0 Gb / 45.0 hr | / | / | / | ≥80% |
| SE 400 | 32.0 Gb / 30.0 hr | 60.0 Gb / 33.0 hr | / | / | / | ≥75% |

*The sequencing time is for dual index (8+8);

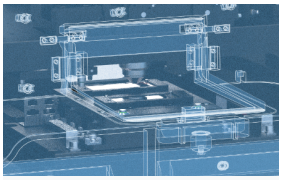
*The data throughput mentioned above is for a single chip; Salus Pro can run two chips simultaneously;

*The time mentioned above is the theoretical sequencing time for a single chip;

| Sequencing Methods | Applications | Data Volume/ 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 | 200 / 400 |
| Small Whole-Genome Sequencing | Shotgun Metagenomics | 20 M reads | SE 75 | 4 / 8 | 8 / 16 | 12 / 25 | 25 / 50 | 50 / 100 |
| | 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 |

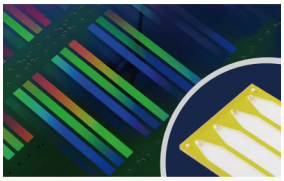
*Up to 2 chips per run

# Tech Innovations



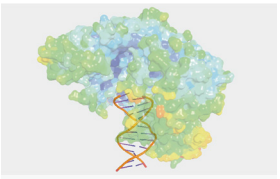
### New Optical System

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



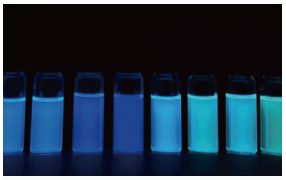
### New Chips

Robustness and better reaction efficiency



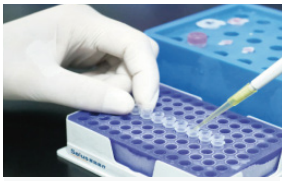
### New Enzymes

Read length up to PE 250 with better quality



### New Fluorescent Dye

Proprietary dyes systems 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

## Non-Invasive Prenatal Testing (NIPT)

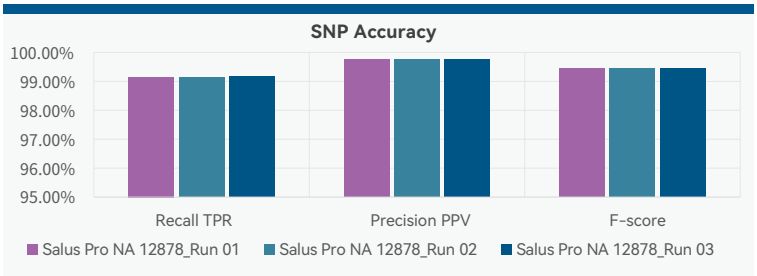
**Sample:** NIPT Standard Samples

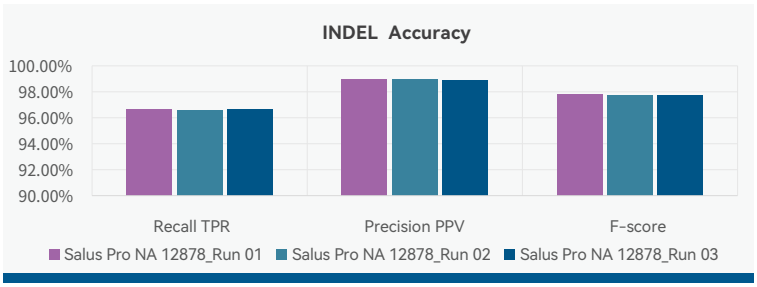
| Sample Code | Reads | Average Coverage (%) | Sequencing Depth | GC-content | Results from Salus Pro | Reference Results | Consistency |
|---|---|---|---|---|---|---|---|
| 1 | 12372305 | 14.82 | 0.190 | 41.35 | T13 | T13 | Yes |
| 2 | 11344000 | 13.84 | 0.174 | 41.59 | T13 | T13 | Yes |
| 3 | 12441958 | 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 |

## Whole Genome Sequencing (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**

- Early detection
- Genetics
- NIPT
- PGT-A



**Public Safety**

- Disease control
- Customs
- FDA/NMPA/EMA
- Forensics



**Research**

- Animals
- Plants
- Biology
- Medicine



**Breeding**

- Agriculture
- Livestocks
- Aquaculture



**Environment**

- mNGS
- eDNA



**Consumer**

- Ancestry
- Sports
- Wellness

# Salus Pro 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 * 6 |
| | 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 and 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 sterilzation with alcohol.

# Salus

## Empower and Cooperate

Innovation for a better life. Powered by a multidisciplinary team in engineering, chemistry, molecular biology, and bioinformatics, Salus operates internationally and is dedicated to delivering high-throughput genetic sequencing platforms and super-resolution spatial omics tools to the life science industry, empowering users across clinical and academic applications.



Sequencing Lab



Manufacturing Facilities



Enzyme Development



Reagent Production Line

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