CycloneSEQ | MGI

G100-ER

Nanopore Genetic Sequencer

Nano Gates to the Macro Cosmos

For Research Use Only

Maximizing Your Research Potential

With flexible throughput options and exceptional capabilities such as **broad coverage**, **rapid sequencing**, and **flexible testing**, G100-ER meets the diverse needs across various applications, such as microbial genome research, microbial metagenome sequencing, amplicon-based microbial detection, targeted disease testing, small whole-genome assembly and whole transcriptome sequencing, etc.

Broad Coverage

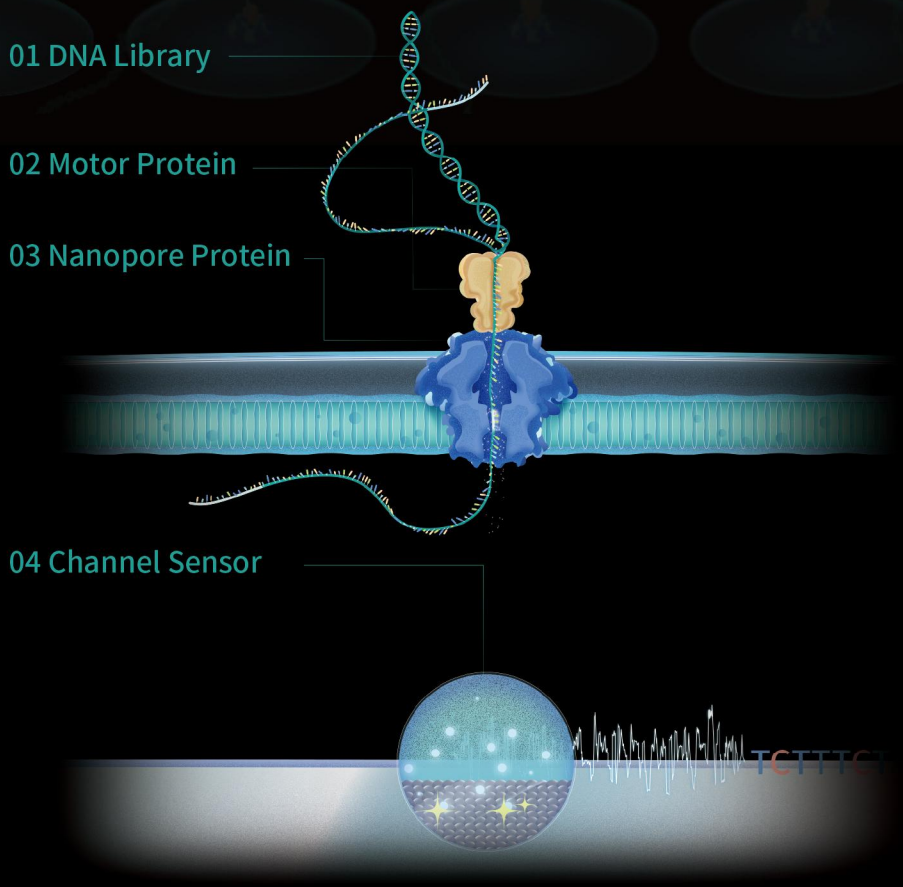
Rapid Sequencing

Flexible Testing

The Key to the Genome's Treasures

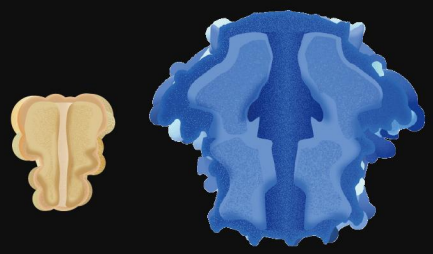
Sequencing Principle

During the G100-ER sequencing process, the **DNA library** molecules linked to the **motor protein** are drawn to the vicinity of the **nanopore protein** embedded in the membrane under the influence of electric field forces, where they are captured by the nanopore protein. Meanwhile, motor proteins situated near the nanopore proteins entrance, steadily and rapidly unwinding the DNA. This allows the DNA libraries to pass through the nanopore as a single strand. Different DNA bases and their arrangement impede the current to varying degrees, triggering the current fluctuations. The **channel sensor** captures these current fluctuation data and transmits them to the computer system, where basecalling algorithms parse the information to achieve real-time and accurate gene sequencing.



Tech Advances, Powering Ahead

Key Proteins



Mined from Deep-Sea Metagenomic Database

Engineered for Protein Design Innovation

Robust Stability, Powerful Capture, High Speed

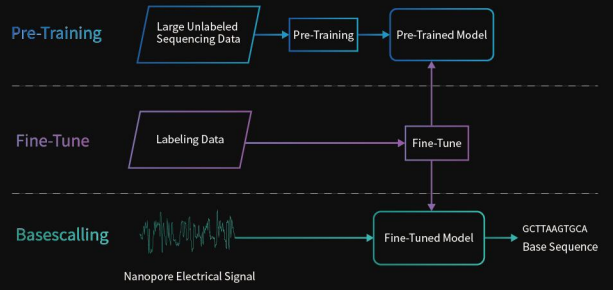
Sequencing Flow Cell

High-Density Array

Ultra-Precise pA-Level Current Detection

High Density, Low Noise, Durable Fuel Chemistry

Basecalling Algorithm



Optimization of Deep Learning Algorithms in the ASR Field

Large-scale Distributed Training on Huge Amounts of Data

Cutting-Edge, High Precision, High Performance

Performance Parameter

Number of Nanopore Proteins	Sequencing Acquisition Time	Designed Throughput/Flow Cell
4096/Flow Cell	Real-time	85 Gb

3.08 kg

Diverse Applications

G100-ER has broad application prospects and potential in the field of life sciences, empowering different application scenarios.

Ordering Information

Product Name	Model	Specification	Cat. no
Nanopore Genetic Sequencer	G100-ER	CycloneSEQ（Sequencer）	H900-000048
Nanopore Genetic Sequencer Bundle 2	G100-ER	CycloneSEQ (Sequencer+Workstation+Keyboard & Mouse+Display Screen)	H910-000022
WT Sequencing Flow Cell	WT	2 pcs/set	H930-000002-00
CycloneSEQ WT Sequencing Kit	/	6 T	H940-000016
CycloneSEQ G100-ER Flow Cell Wash Kit	G100-ER-WK	6 T	H940-000098
CycloneSEQ Universal Library Prep Set	/	24 RXN	H940-000084
CycloneSEQ 24 Barcode Library Prep Set	/	4 RXN	H940-000081
CycloneSEQ 96 Barcode Library Prep Set	/	3 RXN	H940-000066
CycloneSEQ Barcode Sequencing Adaptor	/	4 RXN	H940-000087

Manufacturer

BGI Hangzhou CycloneSEQ Technology Co., Ltd.

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Official website

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