CycloneSEQ | MGI

ATOPlex Fast Ebola Whole-Genome Targeted Sequencing Package (for DNBSEQ/CycloneSEQ)

Highlights

Broad coverage

1) Covers four human pathogenic types: Ebola virus (EBOV), Sudan virus (SUDV), Bundibugyo virus (BDBV), and Taï Forest virus (TAFV).
2) Amplicon length: 190~270 bp, 376plex.

Automation friendly

With the MGISP-100 automated library preparation system and data analysis software, automated library preparation and data analysis can be achieved, reducing manual labor.

Excellent data quality

The unique DNBSEQ and CycloneSEQ sequencing technology provides high-quality sequencing data for downstream analysis.

Comprehensive analysis functions

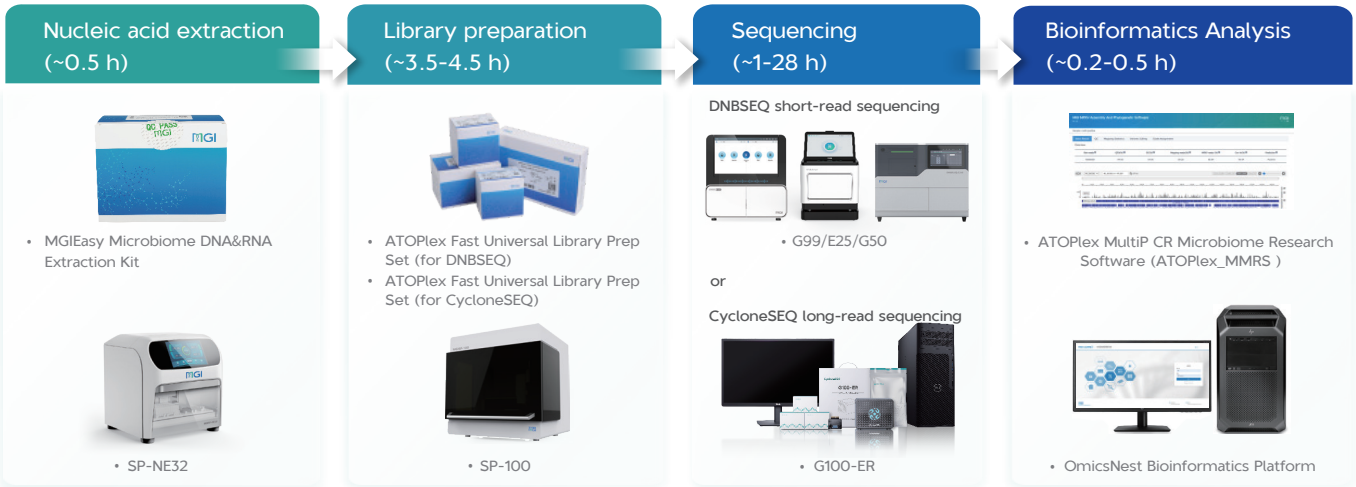
The self-developed software meets the needs of identification, genome assembly, variation detection and traceability.

Comprehensive Solution Introduction

Based on MGI's reagents, automated sample preparation systems, high-throughput sequencing platforms and data processing systems, the entire process from sample to result is covered. This enables fast and accurate high-throughput sequencing of samples, allowing for pathogenic microbiome typing, genome assembly, prediction of virulence and drug resistance genes, and systematic evolutionary analysis, which provides tools for the precise identification, routine surveillance, and epidemiological surveys.

The ATOPlex Fast series is compatible with both DNBSEQ and CycloneSEQ platform, meeting the diverse needs of various application scenarios. The short-read solution (using DNBSEQ-G99, etc.) offers high cost-effectiveness, accuracy and high-throughput, which is suitable for large-scale epidemiological surveys and routine surveillance. The long-read solution (G100-ER) can complete single-sample sequencing in just 1 hour, with the entire process from sample to report taking only 6 hours. It perfectly fitting the needs of rapid pathogen screening and emergency traceability.

The ATOPlex MultiPCR Microbiome Research Software (ATOPlex_MMRS) is designed for ATOPlex targeted sequencing data analysis for both long-read and short-read data. Besides, it includes reference genomes and primer sequences for SARS-CoV-2, MPXV, DENV, RSV, CHIKV, with modules for the identification, assembly, and tracing of target microorganisms. In addition, the software supports the user-defined input of reference genome sequences and primer information for specific species, thereby enabling the above analyses for those species



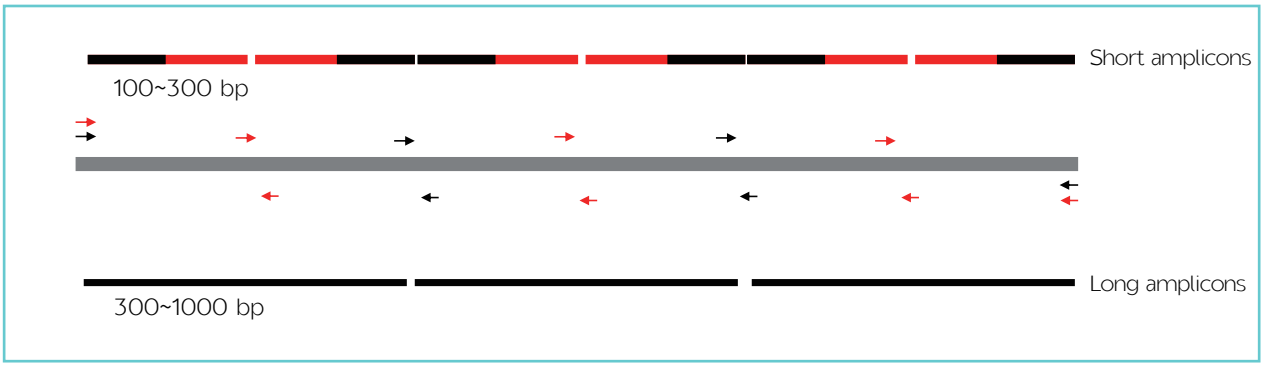
ATOPlex Fast Series

The ATOPlex Fast Series is built upon the core technology of ultra-high multiplex PCR. It provides customers with a highly flexible amplicon library preparation solution that delivers excellent performance. The panel is customizable and is fully compatible with both long and short sequencing, as well as automation platforms, enabling targeted sequencing to be applied in multiple fields, including public health, environmental monitoring, forensics, food safety, agriculture, and DTC, etc.

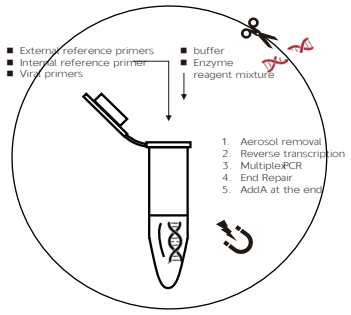
The ATOPlex Fast Targeted Sequencing Solurion for pathogens has also been validated in the surveillance of multiple viruses, including RSV, CHIKV, hMPV, PIV, NiV.

01 Choose either long or short read length

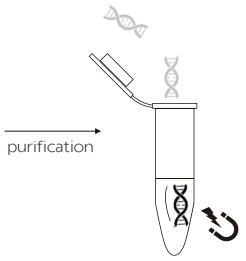
The ATOPlex Fast panel is designed to allow you to choose long or short read length sequencing solutions to fully meet your needs.



02 One tube can achieve 5 functions



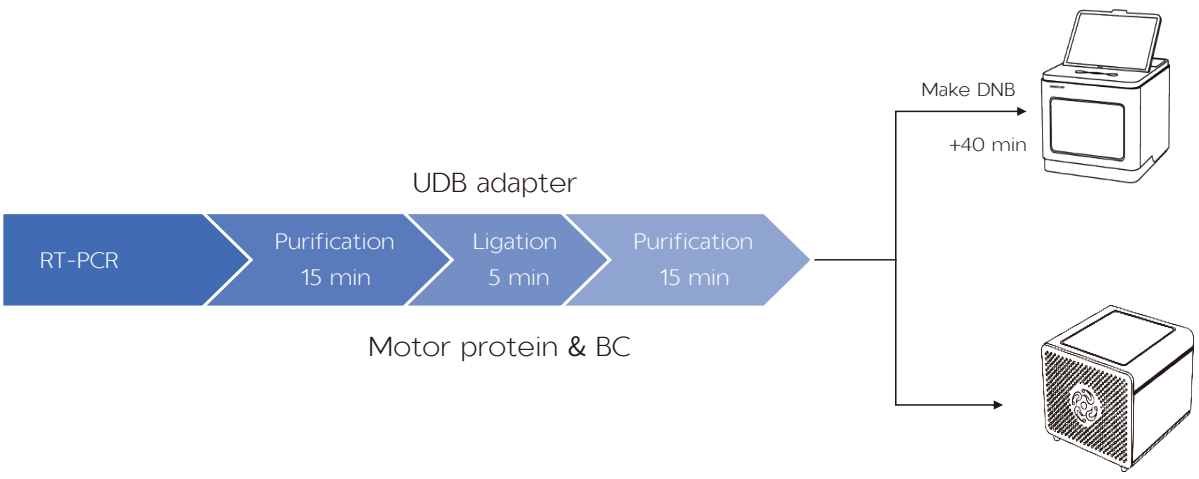
All In One Enrichment



5 min adapter connection

- ☑ Reverse transcription and PCR in just one step, achieving five key functions in one tube.
- ☑ No additional end-repair or A-tailing is required.
- ☑ Rapid ligation takes only 5 minutes.
- ☑ Compatible with both DNBSEQ and CycloneSEQ platforms.
- ☑ Compatible with MGI automated instruments.
- ☑ Suitable for DNA/RNA and DNA & RNA co-library preparation.

03 The entire process of library preparation only requires 4 steps



Ordering information

Short-read sequencing:

Category	Product Name	Product Number
Nucleic Acid Extraction		
Reagents	MGIEasy Microbiome DNA&RNA Extraction Kit PMT- 48 Preps/Kit	940-002223-00
	MGIEasy Microbiome DNA&RNA Extraction Kit PMT- 96 Preps/Kit	940-002222-00
Automation Instruments	Automated Nucleic Acid Extractor MGISP-NE32RS	950-000020-00
Library Preparation		
Primer	ATOPlex Fast Custom Panel (500 plex)	950-000215-00
Reagents	ATOPlex Fast Universal Library Prep Set (for DNBSEQ) / 16 RXN	940-002900-00
	ATOPlex Fast Universal Library Prep Set (for DNBSEQ) / 96 RXN	940-002906-00
Automation Instruments	DNA Sequencing Library Preparation System MGISP-100RS	900-000206-00
Sequencing		
E25	DNBSEQ-E25RS High-throughput Sequencing Set (FCL PE150)	940-000567-00
	DNBSEQ-E25RS Genetic Sequencer	900-000537-00
G99	DNBSEQ-G99 High-throughput Sequencing Set (G99 FCL PE150)	940-001269-00
	DNBSEQ-G99RS Genetic Sequencer	900-000607-00
G50	DNBSEQ-G50RS High-throughput Sequencing Set (FCL PE150)	940-001620-00
	DNBSEQ-G50RS Genetic Sequencer	900-000354-00
Data Analysis		
Hardware	OmicsNest Bioinformatics Platform	900-001195-00
	OmicsNest Lite Bioinformatics Platform	900-001196-00
Software	ATOPlex MultiPCR Microbiome Research Software	970-000518-00

Long-read sequencing:

Category	Product Name	Product Number
Nucleic Acid Extraction		
Reagents	MGIEasy Microbiome DNA&RNA Extraction Kit PMT- 48 Preps/Kit	940-002223-00
	MGIEasy Microbiome DNA&RNA Extraction Kit PMT- 96 Preps/Kit	940-002222-00
Automation Instruments	Automated Nucleic Acid Extractor MGISP-NE32RS	950-000020-00
Library Preparation		
Primer	ATOPlex Fast Custom Panel (500 plex)	950-000215-00
Reagents	ATOPlex Fast Universal Library Prep Set (for CycloneSEQ) / 24 RXN	940-002902-00
Automation Instruments	DNA Sequencing Library Preparation System MGISP-100RS	900-000206-00
Sequencing		
Sequencer	Nanopore Genetic Sequencer G100-ER	H900-000048
	Nanopore Genetic Sequencer Bundle 2 (G100-ER sequencer+workstation+Keyboard & Mouse+Display Screen)	H910-000022
Reagents	WT Sequencing Flow Cell (2 pcs/set)	H930-000002-00
	CycloneSEQ WT Sequencing Kit (6 T)	H940-000016
Data Analysis		
Hardware	OmicsNest Bioinformatics Platform	900-001195-00
	OmicsNest Lite Bioinformatics Platform	900-001196-00
Software	ATOPlex MultiPCR Microbiome Research Software	970-000518-00

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