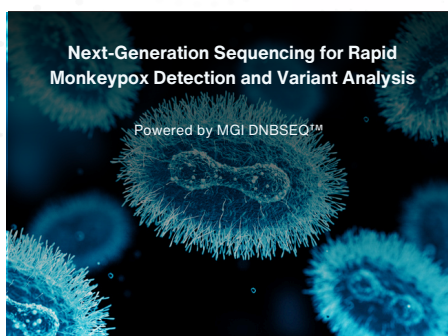


MGI Monkeypox (MPXV) Sequencing Solutions

Facilitating Rapid Analysis of Monkeypox: Sample To Report



Monkeypox is a zoonotic viral disease that has seen an increase in cases globally, raising public health concerns due to its potential to cause widespread outbreaks. MGI's Next-Generation Sequencing (NGS) technology offers cutting-edge solutions built on DNBSEQ technology for fast, accurate identification and analysis of Monkeypox to support global public health responses.



Monkeypox (MPXV) Targeted ATOPlex Sequencing Workflow

Based on patented ATOPlex technology, MGI has developed a targeted sequencing sample to report workflow to accurately identify MPXV using MGI's MPXV Software to facilitate identification, genome assembly, variant detection and evolutionary tracing analysis. Experience efficient, rapid and cost-effective sequencing of MPXV From sample to report in as little as 16 hours.

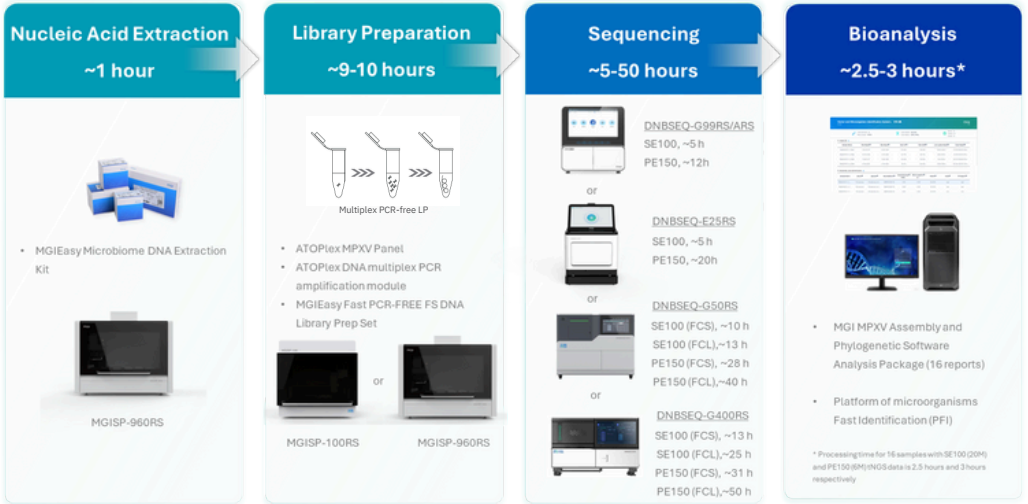


Monkeypox (MPXV) Metagenomic Sequencing Workflow

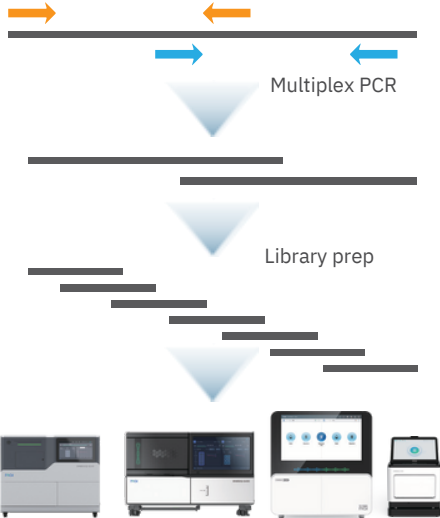
Leveraging MGI's MPXV Software, users can undergo a metagenomics approach to target MPXV variants, providing crucial information on how the virus is evolving and spreading and analyze viral diversity and abundance simultaneously with the Platform of microorganisms Fast Identification (PFI). Expand your monkeypox for comprehensive reporting from sample to report in as little as 18 hours with DNBSEQ-G99.



Monkeypox (MPXV) Targeted ATOplex Sequencing Workflow



Technical principle



Highlights

- Short TAT**
Less than 9 hours from virus DNA to library
- High coverage**
Cover up to 99% monkeypox genome
- Accurately quantify**
Reagent contain the spike-in control for virus quantification
- Full Analysis Functions**
With MGI MPXV Software, Identification, assembly, tracing, variants



Explore more on our webpage

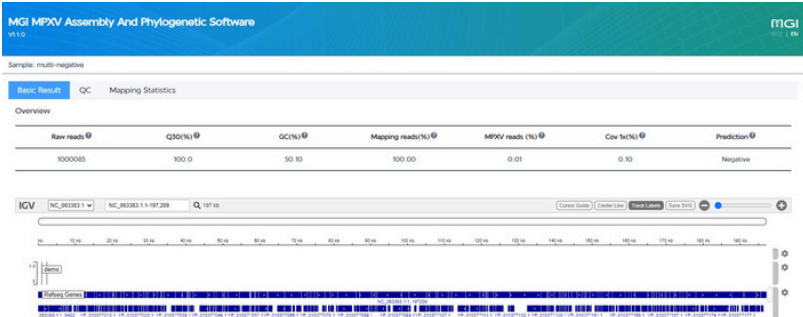
Monkeypox (MPXV) Targeted ATOplex Sequencing Workflow

Parameters	Specifications
Intended use	Monkey pox identification and whole genome sequencing
Covered region	MPXV full length genome (NC_063383.1)
Amplicons Size	313-395 bp
Amplicon number	739 amplicons
Sample type	gDNA from blister fluid, oropharyngeal swabs, nasal swabs, saliva
TAT from DNA to library	Less than 9 hours
Sequencing platform	DNBSEQ-G400RS/DNBSEQ-G50RS/DNBSEQ-G99ARS/DNBSEQ-E25RS
Sequencing length	SE100+10+10 (faster speed) or PE150 (more samples)
Recommended reads	20 M/sample (faster speed) or 6 M/sample (more samples)

Integrating with MGI's reagents and equipment, our solution offers end-to-end processing from sample to report, delivering comprehensive support for monkeypox virus surveillance and source tracking. Choose the SE100 solution for faster sequencing, or the PE150 solution for higher throughput.

■ MGI MPXV Assembly and Phylogenetic Software Analysis Package

MGI's self-developed high-throughput sequencing analysis solution for monkeypox virus is an ideal tool for the identification, mutation detection, and strain typing of monkeypox virus. It supports the entire process from raw data quality control to the output of analysis reports, suitable for metagenomic sequencing samples with monkeypox virus and sequencing samples based on the ATOplex multiplex PCR kit.

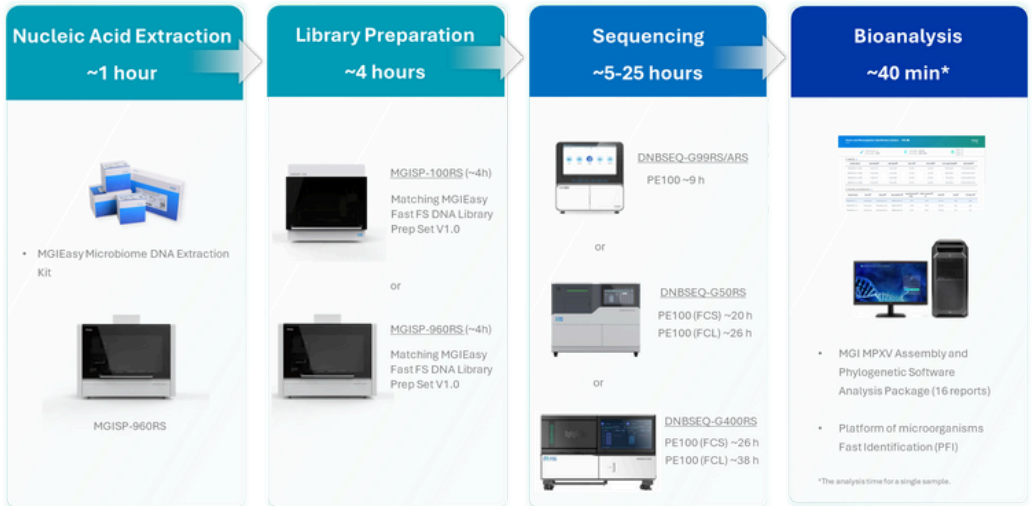


Features:

- MPXV identification
- Mutation detection
- Strain typing
- Built in Nextclade software provides traceability analysis offline



Monkeypox (MPXV) Metagenomic Sequencing Workflow



Ordering information

Category	Name	PN
Genetic Sequencer	DNBSEQ-E25RS Genetic Sequencer	900-000537-00
	DNBSEQ-G99RS Genetic Sequencer	900-000607-00
	DNBSEQ-G99ARS Genetic Sequencer	900-000609-00
	DNBSEQ-G50RS Genetic Sequencer	900-000354-00
	DNBSEQ-G400RS Genetic Sequencer	900-000170-00
Automation Instrument	MGISP-100RS Automated Sample Prep System	900-000206-00
	High-throughput Automated Sample Preparation System MGISP-960RS Config2	900-000147-00
	High-throughput Automated Sample Preparation System MGISP-960RS Config7	900-000152-00
Nucleic Acid Extraction Reagent	MGI Easy Microbiome DNA Extraction Kit MD01T-96 (96RXN)	1000027955
Library prepare reagent	ATOPlex MPXV Panel(16RXN)	940-000565-00
	ATOPlex MPXV Panel (96RXN)	940-000561-00
	ATOPlex RNA multiplex PCR amplification module(16RXN)	940-000128-00
	ATOPlex DNA multiplex PCR amplification module (96RXN)	940-000124-00
	MGI Easy Fast PCR-FREE FS DNA Library Prep Set (16RXN)	940-000019-00
	MGI Easy Fast PCR-FREE FS DNA Library Prep Set (96RXN)	940-000021-00
Sequencing reagent	DNBSEQ One Step DNB Make Reagent Kit (4RXN)	1000026466
	Standard Library Reagent (PCR Product)	1000027585
	DNBSEQ-G99RS High-throughput Sequencing Set (G99 FCL SE100/PE50)	940-001268-00
	DNBSEQ-E25RS High-throughput Sequencing Set (FCL SE100)	940-000573-00
	DNBSEQ-G99RS High-throughput Sequencing Set (G99 FCL PE150)	940-001269-00
Bioinformatic analysis	DNBSEQ-E25RS High-throughput Sequencing Set (FCL PE150)	940-000567-00
	MGI MPXV Assembly and Phylogenetic Software Analysis Package (16 reports)	970-000311-00
	Platform of microorganisms Fast Identification	900-000393-00

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