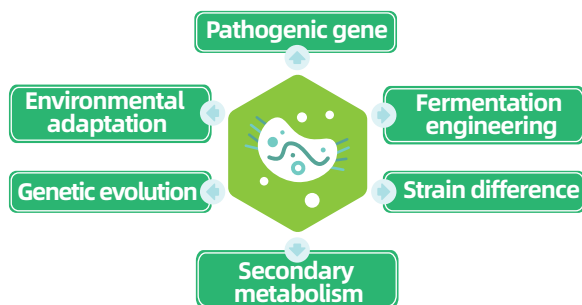


Fungal Genome Sequencing

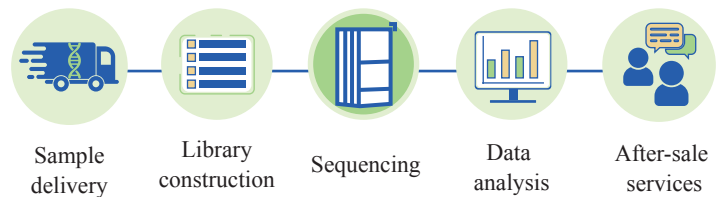
Product Introduction

Biomarker Technologies provides whole genome, genome survey, draft genome and fine genome sequencing of fungi depending on specific research goal. Genome sequencing, assembly and functional annotation can be achieved by combining Next-generation sequencing + Third-generation sequencing to achieve high-level genome assembly.

Application



Service Workflow



Bioinformation Product

Genome sequencing:

- ① Fungal whole genome sequencing-Illumina

Genome assembly:

- ② Fungal whole genome sequencing-Illumina
- ③ Draft fungal genome-Illumina
- ④ Hi-C based fungal genome
- ⑤ Fungal fine genome-Nanopore
- ⑥ Fungal fine genome-PacBio



Service Advantages

- Multiple sequencing strategies are available for different fungal genome research goals.
- In pathogenicity, resistance, environmental adaptability, metabolic pathways and other multi-angle to dig deeper into functional genes.
- Provide a variety of fungal genome analyses, interpret the detailed information of fungi, and have a comprehensive understanding of genomic information.
- Highly experienced in fungi genome assembly with over 10,000 microbial genomes assembled.
- Professional after-sale technical support team fulfilling more specific research needs.

Service Specifications

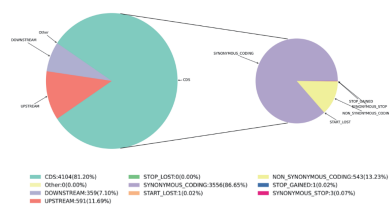
Library	Sequencing	Recommended data	Turnaround Time
Illumina	PE150	GS≤60M; 100X NGS (Survey: 50X NGS)	30
PacBio	ZMW	GS≤60M; 30X HIFI+50X NGS	33
Nanopore	ONT	GS≤60M; 100X ONT +50X NGS	33

Sample Requirements

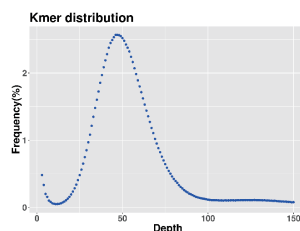
Platform	Qubit Conc. (ng/μL)	Amount (μg)	Volume (μL)	Purity
Illumina	1	0.06	20	OD260/280: 1.7-2.2; OD260/230: ≥1.6; Nanodrop/Qubit: 0.8-2.5
PacBio	20	1 μg/1 G ≥2.0	20	
Nanopore	40	2	20	

Demo Results

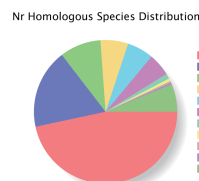
1. Fungal whole genome sequencing -SNP annotation result statistics



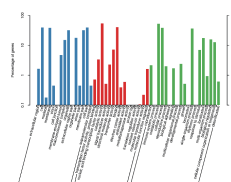
2. Fungal genome survey -K-mer depth distribution



3. Draft fungal genome -Nr database annotation



4. Fungal fine genome -GO database annotation



Featured Publications

Year	Journal	Paper	Article	DOI
2023	Scientific Data	Gapless genome assembly of <i>Fusarium verticillioides</i> , a filamentous fungus threatening plant and human health	Genome evolution	10.1038/s41597-023-02145-8
2023	Journal of Fungi	Genetic and Molecular Evidence of a Tetrapolar Mating System in the Edible Mushroom <i>Grifola frondosa</i>	Genetics and hybrid	10.3390/jof9100959
2022	Plant disease	Genome Resources for Four <i>Claviceps</i> Species Causing Dollar Spot on Diverse Turfgrasses	Disease treatment	10.1094/PDIS-08-22-1921-A



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