

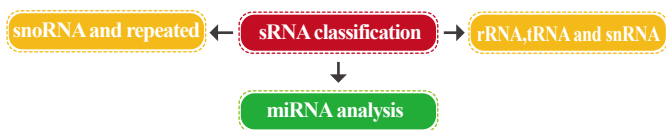
Small RNA Sequencing

Product Introduction

Small RNA refers to a class of non-coding RNA molecules that are usually less than 200 nt in length, including micro RNA (miRNA), small interference RNA (siRNA), and piwi-interacting RNA (piRNA).

MicroRNA (miRNA) is a class of endogenous small RNA with a length of about 20-24 nt, which plays a variety of important regulatory roles in cells. miRNA is involved in many life processes revealing tissue-specific and stage-specific expression and is highly conserved in different species.

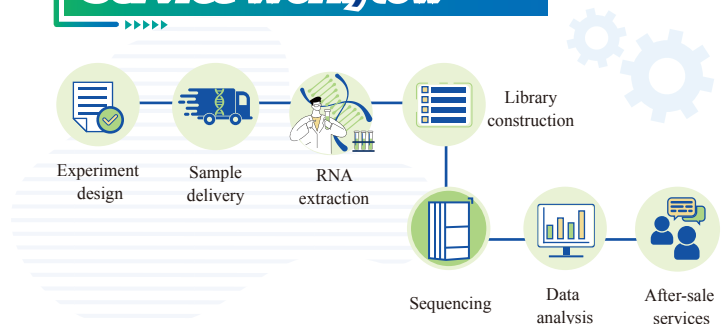
Technical Features



Bioinformation Product

- ▶ Small RNA identification, classification, and annotation (miRBASE, RepBASE, Rfam, SILVA, GtRNA-Adb, etc.);
- ▶ miRNA base preference and base editing;
- ▶ miRNA quantification and differential expression analysis;
- ▶ miRNA target gene prediction;
- ▶ Function annotation and enrichment on DE-miRNA target genes.

Service Workflow



Service Advantages

- ▶ Extensive experience in sRNA sequencing with hundreds of closed projects covering 100+ species.
- ▶ Strict quality control system monitoring the entire project process.
- ▶ Comprehensive bioinformatics analysis on small RNA expression as well as target molecule prediction.
- ▶ Joint analysis available for miRNA+mRNA; miRNA+lncRNA; miRNA+circRNA+lncRNA, etc.
- ▶ **After-sale services:** After-sale services are valid for 3 months upon project completion, including project follow-up, trouble-shooting, results Q&A, etc.

Service Specifications

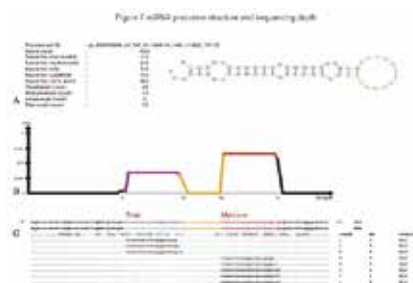
Library	Platform	Recommended data	Data QC	Time
sRNA	Illumina SE50	10M/20M reads	Q30≥85%	25 days

Sample Requirements

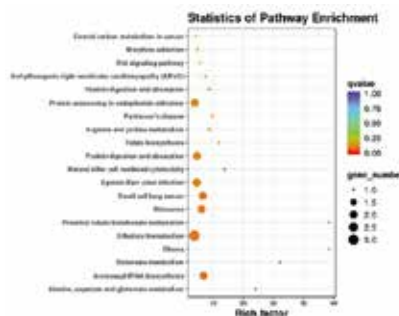
Amount	Purity	Integrity
Conc. ≥80 ng/μL; Volume ≥ 10 μL; Total ≥ 0.5 μg	OD260/280=1.7-2.5 OD260/230=0.5-2.5 Limited or no protein or DNA contamination shown on gel.	For plants: RIN≥6.5; For animals: RIN≥6.5; 5.0≥28S/18S≥1.0; limited or no baseline elevation

Demo Results

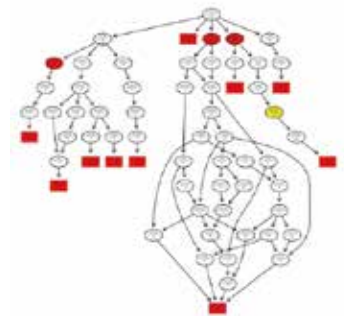
1. Candidate precursor of novel miRNAs predicted by miRDeep2



2. KEGG enrichment on DE-miRNA targeted genes



3. GO enrichment on DE-miRNA targeted genes



Featured Publications

Year	Journal	Paper	Article	DOI
2023	EMBO Reports	The plant FYVE domain-containing protein FREE1 associates with microprocessor components to repress miRNA biogenesis	Developmental regulation	10.15252/embr.202255037
2023	Plant Physiology and Biochemistry	Viral infections inhibit saponin biosynthesis and photosynthesis in Panax notoginseng	Disease treatment	10.1016/j.plaphy.2023.108038
2022	International Journal of Molecular Sciences	The MicroRNA Ame-Bantam-3p Controls Larval Pupal Development by Targeting the Multiple Epidermal Growth Factor-like Domains 8 Gene (megf8) in the Honeybee, Apis mellifera	Developmental regulation	10.3390/ijms24065726



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