Eukaryotic RNA Sequencing

1.Sample Requirements

Library Type	Sample Type	Amount	Volume	Concentration	*RIN (Agilent 2100™)	Purity (NanoDrop™)
Eukaryotic cDNA Library	Total RNA	** ⩾ 0.4 μg	⩾ 20 μL	⩾ 20 ng/μL	⩾ 6.8 (Animal), ⩾ 6.3 (Plant and Fungus), with smooth base line	OD260/280 ⩾ 2.0; OD260/230 ⩾ 2.0; no degradation, no contamination
	Total RNA (Blood)	⩾ 0.8 μg				
	Total rNA (Single cell)	⩾ 100 ng	⩾ 10 μL	⩾ 10 ng/μL		
	Amplified cDNA (double-stranded)	⩾ 100 ng	⩾ 10 μL	⩾ 10 ng/μL	Fragments should be distributed between 400bp - 5000bp with main peak at ~2000 bp	OD260/280 ⩾ 2.0 OD260/230 ⩾ 2.0; no degradation, no contamination
Eukaryotic Strand Specific Library	Total RNA	⩾ 0.8 μg	⩾ 20 μL	⩾ 20 ng/μL	⩾ 6.8 (Animal), ⩾ 6.3 (Plant and Fungus), with smooth base line	OD260/280 ⩾ 2.0; OD260/230 ⩾ 2.0; no degradation, no contamination

*RIN: RNA Integrity Number
**For total RNA less than 100 ng, please contact us for ultra-low input solutions.

2.Sequencing Parameters

Platform	Illumina NovaSeq 6000
Read length	Paired-end 150 bp
Recommended sequencing depth	⩾ 20 million read pairs per sample for species with reference genome; ⩾ 50 million read pairs per sample for species without reference genome (de novo transcriptome assembly)
Data quality	Q30 ⩾ 80%, exceeding Illumina's official benchmark of ⩾ 75%
**Turnaround time	2~3 working weeks from library construction verification to data releasing without bioinformatic analysis.

***Turnaround time varies depending on the project volume.

3.Data Analysis Contents

Standard analysis
Data filtering
Transcriptome assembly & Gene functional annotation (only for species without reference genome)
Mapping to reference genome/assembled genome
Gene expression quantification & Differential expressed genes profiling & Enrichment analysis
Protein-protein Interaction (PPI) analysis
Transcription factors functional annotation analysis
Oncogene functional annotation analysis
SNP & InDel analysis
Alternative splicing analysis
Fusion gene prediction (Only for tumor sample and cancer cell line)